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THE SCHOOL JOURNAL

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Training to Accuracy.

By SUPT. A. B. COLE, Plainville, Mass.

The training which our children need instilled into them is the feeling that nothing is right which is not exactly right. A railroad official brought up on "nearly right" idea might be justified in making a time-table by which the departure and crossing of trains at junctions might have a latitude of five minutes, more or less. We doubt whether the school officials who developed in that boy his ideas of exactness would care to be a patron of his railroad.

A child draws a map in school and gets things "pretty nearly" where they ought to be. "Of course, the map is going into the waste basket, and so we can't spend too much time," says the teacher. The habits of the child, however, are going thru life; and if he should enter the Board of Coast Survey and make a chart on the principle of his common school teaching, the life of every sailor on the broad sea would not be worth the snap of one's finger.

A child who has been permitted to go on without the thoro mastery of his combinations can never become proficient in arithmetic. A boy of ten who halts on his multiplication tables will limp thruout his business career. Leave fractions with the child's mind hazy, and he may as well bid adieu to mathematics. We often hear the expression, and some text-books bear out the idea, "Never mind the decimal, if the whole number is correct." So far as that problem is concerned and its influence as a disciplinary value, it would be just as sensible to say, "Never mind the unit's period; get the thousands right, tho."

Are we teaching grammar school history with the idea of thoroness and clearness? Here it is very easy for a talkative pupil to say a lot of thingsthat sound well. But as these young people are to become future citizens, and the terms so new and strange to them in their school days will later have a meaning, or ought to have one, it is almost absolutely necessary that the underlying principles of history be taught carefully and correctly. We hear of Jeffersonian Democrats. How many men in the rank and file can define their politics? A great political party celebrates Andrew Jackson's birthday. Why? The lives of Jefferson and Jackson must be worth teaching if millions of men in this country are willing to follow the doctrines they expounded.

We hear a good deal of the Monroe doctrine. Do we teach it so that our children can act intelligently later in life? Are we teaching the industrial growth of our nation in such a manner that the child can draw conclusions regarding the outcome of present conditions judging by the past?

Of the many things which a teacher must handle in the school-room nothing is more essential than language. If all the formal definitions and rules were collected they would not occupy a very large pamphlet and yet after a child has passed thru eight or nine years in the elementary schools, the high school principal complains that the child doesn't know anything about grammar, meaning what the grade teacher would call language.

The pupil goes thru the high school and enters college, and lo! the professor says he doesn't know any-

thing about English! "Woefully deficient!" After four years of college education he secures a position on some newspaper only to find that his smallest news item has been subjected to a bad attack of blue pencil simply because he could not express himself in readable composition.

There are many fond theorists who proclaim that the only way to learn to do a thing is by doing it. We all know that the only way to get to a certain place is to travel and get there, but no matter how carefully some kind friend may have directed us, the sight of an occasional guide board on the way inspires new confidence and settles uncomfortable doubts.

In the child's experience in going thru many of his studies might it not be that a few of the old-time rules and definitions would give him confidence and set his mind aright in cases of doubt and, perhaps, ignorance?

If there is one thing needed in our elementary teaching to-day, it is intensive teaching,—not ten thousand facts lightly and superficially treated, but ten basal facts so driven home and clinched in the child's mind that he can no more shake them off than he can his own skin.

Is the pupil's work neat? Is he exact? Does he hear things correctly the first time? Can he get things right at first sight? In his memory work does he miscall the little words? Does he learn a poem completely when told to do so, or does he about half learn it and wait to be prompted?

Do you allow pupils to get the answers to their problems "pretty nearly right," and then figuratively pat the child on the back and tell him that that's near enough, by giving him a rank of ninety-nine per cent.? If he were behind a counter would your teaching of "pretty nearly right" be worth much? Let us think of these things.

On Teaching Spelling.

By George W. Dickson, Tilton, N. H.

Since most men are ordinary men, and are engaged in the ordinary pursuits of life, the training of the child should be such as will best fit him for this ordinary work. The ordinary man will never need to stand in a long line of men and spell words orally. He will need to spell only when he writes. The question is, then, Does oral spelling in school produce the power to spell on paper as later life will demand? Experience teaches that it does not. It is a fact which has been proved by most teachers that a child may be able to spell correctly, orally, words which when asked to write he will misspell.

There is a certain amount of good to be gotten from oral spelling, but time in school work is so valuable that it is not enough to do work which will result in good. We must do work which will result in the greatest good. Because the greatest good comes from written spelling, oral spelling must be set aside as in itself insufficient to fulfill the demands made upon it.

From a general principle which may be illustrated by the statement that "in always creeping a child can never learn to walk" we may infer that to train a child to do a certain work in a certain way does not necessarily prepare him to do the same work in an entirely differ-

ent way. We may state then that the spelling lessons must be written. And yet experienced teachers know that children may take ten, fifteen, even twenty words a day, spelling these words correctly when written in columns, but at the same time misspelling in a composition of one page from three to five common words. Where is the difficulty? It seems to me that writing spelling lessons is not enough. We must go a step nearer to the application of spelling, and say that words must be given in their natural relation to other wordsthat is, they must be taught in sentences. Spelling is not an end-it is a means to expression, and is valuable only so far as it enables the child to express his thought. If a child can spell all the jaw-breaking monstrosities in the dictionary but cannot write a correctly spelled paper on any subject he is studying, or an ordinary letter, without a misspelled word, all his power, which may seem wonderful to the inexperienced observer, is known to the careful teacher to be absolutely worthless.

This leads me to discuss the kinds of words the child most needs to know how to spell, and the sources from which these words should be taken. The country is full of spelling books. I have seen many, and the best thing I can say of them is that the more of them a teacher has, the more deplorable his condition. In looking over one of the latest of these books-one whose authors assert is especially adapted and carefully graded to the capacity of the child,—I have selected a few words for your consideration. I find these words intended for third grade children: dole, quest, quells, and strop. My objection to these words is not that they are too hard, but that the child does not need them. would suggest that since most boys in the third grade have not yet reached the shaving age, there are other words better adapted to meet their immediate needs than strop. The time for a boy to learn to spell strop is when he begins to talk about strop, which leads us to the conclusion that the word need never be taught, for by the time he has a beard, if he can spell anything, he can spell strop.

For fourth grade children I find molecule, secession, and maroon. Among fifth grade words I find diabase, antefix, and epigraph. Don't ask me what these words mean—I haven't had time to consult the dictionary. Is it to be wondered at that when the energy of children is exhausted upon words like these, bright boys and girls in the higher grades of what are reputed to be good schools write have to as "haffto" and going to as "gonter," would have written as "would of written," and spell soldier "s o-l-o-g-e-r" heard h-e-a-r-e-d, and even yes y-e-s-s?

The words the child should learn to spell are the words he understands, and the words he is using every day. For him to learn to spell a single word for which he will not have an immediate use is a waste of time and energy. There are hundreds of words he does want to use at once, more even than he can learn to spell in the time he has to give to them. These words may be found in the conversations of children, and in their daily work in school. They may be taken sometimes from geography, sometimes from language, even from arithmetic, but more often from reading-that is, of course, presuming that the child is reading the right kind of material. The time for the child to learn to spell Australia is when his attention is turned to Australia-when he needs the word. This is the time too when he can learn it with least effort. He has no need of Australia so long as he is studying home geography. Then he wants such words as mountains, valleys, etc. He wants the word adjective when he learns what an adjective is—that is, not when he has learned a definition of an adjective, but when he learns to recognize one, when he learns what it does in a sentence.

Spelling, I believe, is not wholly memory work. There is a certain amount of science in it, and some degree of common sense. When, for instance, a child has learned ripe, he has, if the fact is called to his attention, learned

pipe, stripe, wipe, gripe, and tripe. Many other series may be taught in the same way.

I have found that children learn words more quickly if they write them when they study. In doing this the child has the benefit of two sense impressions—a sound impression as he thinks the word, and a sight impression as he causes the word to appear before him. He sees the word clearly, as he does not see it when he looks at it merely to recognize it,—that is, when he sees it as a whole. It is the business of the teacher to cultivate this eye training. If the child sees the word distinctly, the chances are that he will spell it correctly. If he does not see it distinctly, he spells it merely by memory, and memories cannot always be depended upon. Children have the same careless habits of seeing that most grown people have.

Spelling has a few sister subjects. They are capitalization, punctuation, the formation of sentences and cf paragraphs. I am firmly convinced that these subjects if taught in connection with spelling may be taught in less time, with less effort on the part of the teacher, and with more thoroness to the child. This, of course, assumes that the spelling lessons be dictation lessons, and always of sentences. I may say that these sentences must not be isolated statements, but sentences related to each other, and running thru which there is a continuity of thought. The better the teacher the better will be the dictation exercise. The better the exercise, the better the work done by the child.

The good dictation lesson must posses; certain characteristics, chief among which are these:—It must be new to the pupil when it is dictated. It must contain the words he has studied for the day's lesson. It should contain some review words, the more the better. It should interest the child. It should require punctuation marks which he has been taught to use. It should train him in the formation of sentences and para-

graphs.

These companion subjects which I have mentioned must be carefully taught by the teacher. They can never be learned by having the child learn exercises from a book. He must be taught to decide for himself when to begin a new sentence, when to begin a new paragraph. In the study of the words which are to appear in the lessons from day to day, it is the teacher's business to see that the child knows the pronunciation and meaning of each word and can use that word correctly in a sentence before he is asked to learn to spell

A great fault in the teaching of spelling is that teachers find it requires less exertion to "give out" ten words to be studied than to do the teaching necessary in the work suggested above. Another fault, and this is the fault of the conscientious teacher, is that he is too ambitious to get ahead. He gives the child too many words—ten words to day, and ten more to-morrow is the plan of too many teachers. By the time the child has learned the fourth ten, the first ten are entirely forgotten. There must be constant review,—not as single words, but old words made over into new lessons, as old hats are sometimes made into new ones. The child who can take three hundred words in ten weeks and learn practically all of them, may take six hundred words in ten weeks and not learn any of them.

In conducting a spelling lesson such as I have tried to set forth, I would not allow the children to write or even look at the paper until I had finished speaking. I would never repeat, unless the inability to understand was caused by some disturbance not under the control of the child. I would not accept a paper upon which a letter had been made over or a word had been scratched out. I would insist upon careful work and I would make an "awful fuss" if I didn't get it.

If you don't believe what I have said, try it. You will see your pupils daily grow strong in the power to take in, and in the power to retain and express that which they do take in.

Educational Association of China.

[ABSTRACTS OF TWO ADDRESSES BEFORE THE CONVENTION AT SHANGHAI, MAY 21-23.]

The Educational Outlook in China.

By JOHN C. FERGUSON.

The present condition of educational work exhibits the same elements of vagueness and uncertainty that now characterize the general political situation of China. Two leading missionary colleges of Chihli province have been destroyed, and one government college at Tientsin. All the other schools thruout the north and west of China have either been temporarily abandoned for at least some months or have been utterly destroyed. The day schools which were depended upon to supply pupils for the higher schools have met the general fate. In all other parts of China, with the exception of Shanghai, it is safe to say that school work has been seriously interfered with by the troubles, and that it has not yet regained the secure position it previously held.

The government has issued imperial edicts ordering the establishment of schools thruout the empire, and instructing the provincial authorities to carry the order into effect. Peking university has been resuscitated, and an attempt made to constitute a board of educa-In some provinces old colleges which had been abandoned have been brought to life. Small schools have sprung up everywhere, either to teach English or science, or the Chinese language in a new method. Activity is everywhere exhibited, but it is safe to say that neither in the schools under the control of the government nor in those established by missionaries is there as yet any well-defined method of development. Until the Chinese government either in its federal or provincial administration decides upon its future educational policy, it will be impossible for missionary schools to do anything more than supply the local needs of their churches and communities. Neither does it seem possible for the government to decide upon an educational policy until many other administrative policies have been fixed. The time, therefore, for a well-regulated system of education in China has not yet arrived.

When China does establish a national system of education, however, it will be determined by national characteristics, and must be attached in some way to the education of the past. Perhaps it would be safe to describe the educational method which China has followed up to the present time as a complete freedom in subjects and methods of teaching, combined with a fixed standard of examination. Teaching has neither been interfered with nor supervised, and its only restrictions have been the desire of the pupils to attain that scholarship which would make them successful in the examina-In no country has the German university Lehrfreiheit-freedom of teaching-and Lernfreiheit-freedom for the learner-been more conspicuously followed than in China. Schools, whether established by Protestants, Catholics, Mohammedans, or Buddhists, have always been free to teach what they could get people to learn. The State has only reserved to itself the right to decide what qualifications were needed in men who were to be its officers, and has confined itself to prescribing examinations for these. It is to be sincerely hoped that the freedom of teaching and learning will be pre-served in any new system which China may adopt.

Another national characteristic which is bound to impress itself upon the new system is the adaptation of local circumstances and the right of local control. Each viceroyalty or each province is an organized system of local government by itself, and will be bound to control its own schools. Just as in Switzerland each canton controls its schools, because of the great differences in language and modes of life; just as in the United States each state has its own independent educational system; so it is bound to be in China. The example of Japan in having

a strongly centralized system under control of one board of education in the capital cannot be imitated. Japan was able to follow the systems of France and Germany, but the Germans are "too disciplined and too disciplinable," and the French are "too highly centralized in their tendencies" to serve as guides for China. America has too many systems to be of any guidance. Neither can England, with its elementary board and parochial schools, its high elementary schools, its independent Etons and Harrows and its ultra-conservative universities, furnish a guide to China until it is able to establish the authority of the proposed board of education which will bring order out of chaos. Some such example as Switzerland must be found, where, with no surrender of local freedom or local aristocratic literary guidance, some national form of intelligent control may be exercised.

Lessons from Japanese Education.

By R. E. LEWIS.

By way of making a comparison between the new education in Japan and China, it will be well for us to consider the environment of the former. The Meiji era has been characterized by the seclusion of the Shogun, the elevation of the emperor to supreme power, the inauguration of constitutional government, the disestablishment of Buddhism, the organization of the national system of education and the entry of Japan into the brotherhood of nations. In all this there is a suggestion for China. The Japanese did not attempt to reform education alone, and leave the other branches or forces of the national life to go on in the old ignorant and fatuous way. Reform in education will not be effected in China until all branches of the government are renovated.

In 1872 the emperor of Japan proclaimed the educational code in what may be considered the emancipation proclamation of the Japanese mind. This proclamation contained the sentence that:

"It is intended that henceforth education shall be so diffused that there may not be a village with an ignorant family or a family with an ignorant member."

The audacity of this proposition has perhaps never been exceeded in the realm of education, but it has been followed by high resolves on the part of ministers of education. The present status, after thirty years of effort, shows that five millions of Japanese are in the public schools. It is very creditable that 72 per cent. of the total school population are actually under instruction. These pupils are being taught in 27,000 schools by 88,000 teachers. The teachers are being trained in fortynine normal schools. The gradations of the system are, elementary, middle, and higher schools, with the fully developed university to crown the system. In addition there are 230 technical colleges with 25,000 students, as well as many agricultural institutions. Upon this elaborate and highly organized system of education the Japanese people spend each year about thirty-four millions of yen.

In the earlier days Japan called into her service, and relied upon, the advice and educational integrity of American experts. Dr. Verbeck, as first president of Tokio university, laid broad foundations. The normal school system, the common schools, agricultural colleges, musical, gymnastic, and nurses' training systems were also founded by Americane, as was medical education by Germans. The Japanese sent large numbers of youths to America and Europe for education, as China is now in turn sending to Japan.

The control is now vested in the Momhusho, or department of state for education, which has almost arbitrary powers in the realm of higher learning, altho in in the lower grades the counties and cities have charge of details. It is probable that in China the provincial supervisors and provincial treasuries must have a much larger control of the new learning than is the case in Japan.

The creation of words and combinations to express the new ideas of science and truth is creating a silent revolution in the Japanese language. In the primary and middle schools the sciences are taught in Japanese, but for the advanced work in the university, and even in the higher schools, the Japanese are forced to resort to

The problem of teachers has always been vexatious. Altho the forty-nine Japanese normal schools are doing their utmost, yet there is an actual deficit of 32,000 teachers in the force required by the nation. Of the 88,000 thousand teachers at present in that empire only 380 are foreigners. Where is China to secure the tens of thousands of teachers necessary to man the schools which the present decrees call for, if these decrees are carried out with fidelity?

One of the great tenets of Confucianism is that education of and by itself leads to moral choices. But all distinctly religionus teaching is excluded from the classrooms of Japanese government colleges. Count Luoye says that the morals of the students in government colleges without religious instruction are much lower than in Christian colleges with such instruction. The great Neesima affirmed that education bereft of Christianity was dangerous. And the Japanese themselves are working out the solution of the difficulty. Though they are not allowed to teach Christianity in government colleges, yet the Christian students and professors thruout the empire have banded together in a National Union.

The low ideals of the populace have been slow to grasp the meaning of education. And yet Japan has accomplished what none of the prophets dared expect. New truths are becoming a part of her very life, they are being built into the very brain tissue and nerve cells of the nation.

Proposition I. for the South.

By EDWARD ATKINSON in the Manufacturers' Record. [Abridged.]

The old Hebrew myth conveys the idea that mankind has been subjected to labor as a punishment for sin. The modern idea is that "mankind is as lazy as he dares to be," and that it is only under the necessity of labor that any moral, manual, mechanical, linguistic, æsthetic or spiritual factors have been developed in human conception. We differ from other animals in our power to accumulate experience, and we humans differ among ourselves in our methods and capacity for applying experience, so that the material world, its wealth and welfare is full of parodoxes.

The richest states in the world are those which are situated in the temperate zone, where the natural resources are least, to wit, Holland, where the Dutch have made the land, made the crops and made the men capable of resisting the incursions of the sea; England-the most productive market gardens in England are in Norfolk, where the blowing sands have been made firm land capable of production by folding sheep upon them-first fed from the outside and then fed from the crops grown upon the field-an example to the upland districts of the South, where, for lack of mental energy and the power to muzzle the cur dog, your crops yet wait for full fruition; Massachusetts, endowed with granite and ice and originally covered with heavy timber difficult of removal, yet now proportionately the richest state in the Union, its agriculture prospering more than ever before, its progress proved by the desertion of the hill farms, called the abandoned farms, and the application of mental energy or brains in the valleys, on the hillsides, in the pastures, in the creamery and the butter factory. The highest rates of wages paid in agriculture this side of the Rocky mountains are paid here, with low cost of production and a larger proportionate product in ratio to area than in almost any other state.

What was the motive? Necessity and lack of natural resources. What was the foundation? The common school. Sixty-four per cent. of the children foreign born or of foreign origin; sixty per cent. of the adults. Appropriations for schools, \$5 per head. Who pays it? It is assessed mainly upon the capital in improved land, tools, and implements of the state, and, by diffusion, spread thruout the cost of all the manufacturers of the state. Why do the people stand the tax? First, because it is right and just; second, because it is the only way of digesting foreign immigrants of every race, color, and condition; third, because it pays a big profit and supplies capital, nearly every other person of this population of Massachusetts having at his or her credit in the savings banks \$500 in an aggregate deposit of \$500,000,000, of which three-quarters or seven-eighths belongs to the working classes in the narrow use of that term.

That is one side of the picture. Let us look upon the other side—the picture of the Sunny South. Your great resources have existed for centuries. Your lands have been occupied by English-speaking people, black and white or white and black, for more than two centuries. What have your great resources yielded? They have rendered a few people rich for a time. They are now rendering many more people rich. Are they rendering masses of the people prosperous? In a very limited way they may be among those who, possessir g mental energy, combined with manual or mechanical capacity, work moderate hours per day and demand the highest rate of wages that the art in which they are occupied will warrant, in order to justify them in making their products at the lowest cost by the unit of product. But how is it in many of your factories and workshops? Over-long hours, promoting degeneracy; child labor, promoting ignorance; possibly big present profits, delusive and dangerous because at the cost of the future welfare of the community. What e ar your natural resources worth without the development of mental energy, beginning in the common school and ending in the high school or the technical school? How else will you enable the masses of your people to secure the largest product from your great resources with the least expenditure of physical labor and at the highest rates of wages? Why least expenditure of physical labor? Because the Sunry South does in some measure enervate. Mankind can dare to be pretty lazy in much of the Sunny South. A higher type of energy, greater skill, a stronger incentive to work is required in your Sunny South than is called for in the temperate zone, where people must work, and where thruout the long winter the most comfortable work is the indoor work of the modern, well-constructed, welllighted and well-ventilated workshop, factory o. department store.

May I venture on an old story which would hit you rather hard if in the last twenty years you had not changed all that? It was related to me by a very witty member of President Grant's Cabinet who was invited to attend a celebration upon the heights of Harper's Ferry, where he met some of the most courtly gentlemen of the old school, one of whom, clad in the customary black dress coat, ruffled shirt and high hat of a former day, all rather rusty, dilated at great length on the immense natural resources of that section. The secretary got rather tired, and quietly remarked: "All that you say is true, but there seems to be something wanting here." "What is it?" said the old F. F. V., to which the secretary quietly replied, "Brains and industry." Whereupon the old gentleman, with a twinkle in his eye, responded, "Wal, Jedge, I ain't very fond of work myself, I confess."

Now about agriculture. We don't boom it much in Massachusetts, but a few comparisons may be instructive.

Comparisons with Massachusetts of two states of the Sunny South whose potential in agriculture cannot be imagined when the cur dog is muzzled and when common-school education, brains and industry are applied to the land, renovated as it will then be by pasturing sheep upon the exhausted cotton fields:

	Mass.	Georgia.	Alabama.
No. of farms	37,715	224,691	223,220
Average No. of acres in each farm	83.4	117.5	92.7
Value of products at the farms\$4	2,298,294	\$104,304,476	\$91,387,409
Aver. net value of farm product per farm, not including what is fed to stock	\$903	\$410	\$364

Can you tell me what makes the difference, and why a Massachusetts farm should yield more than twice the net income per farm as compared to Georgia and Alabama, with a much less proportionate number of laborers occupied in agriculture? If you cannot answer that question, maybe I can by putting it in another way. Is it not due—

1st. To the common school, kept nine months in the year, from the primary to the high school?

2d. To the exclusion of children from the factory and the workshop, and to their protection by law from the greed of their foreign born parents until they also learn not to force their children to work?

3d. To the reasonably short hours of labor, high relative rates of wages, with the consequent low cost per unit of product in the factory and workshop, whatever that product may be?

4th. To the establishment, support, and constant use of a free public library in all but ten or a dozen of over 360 cities and towns in the state?

5th. To the manual training in the common school and the subsequent technical training, for which the common school makes the necessary preparation?

I admire your constant work in booming the South, but like the old F. F.V. in Virginia, it sometimes makes me a little tired, and it has led me to blow off this final counterblast on the school problem.

I like the English method of conducting discussion as I have often witnessed it in the Old Economy Club in London, founded by Tooke more than fifty years ago, when peer and radical met on equal terms, suppressing mutual admiration, giving hard hits without gloves or buttons on the foil, and maintaining mutual respect and esteem, as I hope we of the North and South may also do.

While I fully concur in the paramount importance of the industrial education advocated by Principal Washington and by the Manufacturers' Record, nevertheless there are good reasons why colored men of superior capacity should have the opportunity to gain the full university education. There are many lawyers and doctors of ability and experience among the colored people. No man can be fully qualified in the practice of either profession without an adequate knowledge of Latin and even a fair knowledge of Greek. That they are capable of attaining a high standard in the university course was proved to me by the presence at the last Phi Beta Kappa dinner at Harvard, of which I happen to be an honorary member, of a colored lawyer of great ability. One of the principal speakers of the class day of the class of 1902 was also a colored man, and I recently met at a wedding festival a colored Cuban and his wife, who had been in the same class with the bridegroom, and who were as well qualified to meet ladies and gentlemen as any other guests who were present on that occasion. He is in full practice of the law in Boston.

These views may be very shocking to persons who have not yet survived the prejudices of the past, but they are acts, and they cannot be ignored.

Chalk Talk in Geography.

Pictured Relief.

By WALTER J. KENYON, State Normal School, San Francisco.

Of the many devices in use for the visualizing of geographical forms, pictured relief is, upon the whole, the most satisfactory. For about two decades a heroic struggle has been made to bring the sand table into use. I have yet to meet, however, the geography teacher who persists in its use after a fair trial. The sand table offers a multitude of disadvantages that more than offset its one service-this not by any means adequate-of visualizing relief. Pictured relief, while free from the shortcomings of sand modeling, far exceeds the latter in its possibilities for suggesting topographic form. It is of such surpassing value in this direction that no textbooks in geography are now published without a series of pictured continental reliefs. It must be said of these, however, that they lack the suggestion of reality. plaster cast lacks interest for the student because it carries the least possible feeling of reality with it. And if such a plaster cast is photographed for reproduction on the text-book page this shortcoming remains. It should therefore be greatly encouraging to the teacher to reflect that her own modest attempts at the blackboard are likely to carry her pupil closer to a realization of structural relief than are the more pretentious representations on the text-book page.

The value of such use of the blackboard, in holding the children's attention and interesting them in their study is very great. And the teacher has only to make a beginning in this work to find it out. One student said that, as she sat day by day with a pictured relief of North America on the board before her, its valleys seemed to dilate and become populated with forms of life.

The value of the drawn relief over the mechanically produced one lies in precisely that touch that is manifest in any piece of handwork. It is the difference between a Greek vase and a cast bottle. Or between the actual marble as it leaves the sculptor's tool and the stamped metal replicas that greet the modern eye at every turn. In any work performed directly by the human hand there is that vibrant throb of life that alone can express thought su'lused with feeling. No other thought is of value, in an educational sense. And this high criterion of all art is no less applicable to the humble device of geographic relief sketching.

The Board.

By long odds the best blackboard for our purpose is the natural slate. And those teachers are to be envied who find themselves in communities so progressive as to fit their schools with such conveniences. In order, however, that less fortunate ones shall not be wholly discouraged, I have purposely drawn some of the accompanying maps upon the poorest possible type of blackboard, to wit, a painted plaster wall. The map of California (Fig. 14), was drawn upon such a "blackboard."

A Substitute for Blackboards.

Frequently our students draw maps of too much value to be summarily erased at the end of the day's work. And often it is desirable to preserve such maps thruout a series of lessons; and again it may be desirable to carry them from room to room for use before various classes. The discovery of black pattern paper is therefore of considerable value in the case. This is a jet black paper used by tailors in cutting patterns. It comes in sheets two feet by three feet, and east of the Rocky mountains costs a cent a sheet at paper warehouses.

This black paper takes the chalk in a most satisfactory way and the marks are readily erased with a cloth. Maps and pictures drawn on this black paper can be carried from room to room or from school to school. Or they may be rolled up or hung up and preserved in definitely. When such an extended preservation is desirable the drawing may be blown with a spray of fixatif, which preserves it against rubbing.

The Crayons.

The crayons to use are those ordinarily used in school-rooms—the common soft "chalk," both white and colored. Most colored blackboard work fails because of its gaudy crudeness. But this may be happily remedied by toning down the harsh colors with charcoal as you work along. A ten cent-box of stick charcoal should be at hand, as it will be called for in any work, whether in plain white or in color.

Pictured Reliefs.

Any possible variation of surface manifests itself by a light and a shade, adjoining each other. Examine a battered tin can and each dent will prove to be just



Fig. 1-The dents in a can.

this: a light plus a shade in mutual relation. And this is true, not alone of depressions, but of elevations as well. Thus, be the irregularity either a hole or a bowl it visualizes itself by the same device—a shadow melting into a light. And at times it is only by the interpreting evidence of surrounding objects that the eye determines which is hole and which is bowl.

For our purpose we may think of a mountain conventionally as a pyramid. It could be represented by three lines, enclosing the two visible slopes. If we now im-

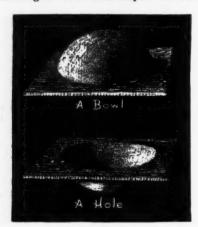


Fig. 2.

agine our pyramid to be lighted on one side, say the west, the other side, by comparison, will be dark.

If we redraw this figure, softening the lines a little, we have a mountain, so far as our present need requires.







A pyramid. A lighted pyramid. Fig. 3.

pyramid. A mountain.

It helps the effect to draw the strokes out, with the bare fingers, into the surrounding plain.

This mountain, so far as map drawing is concerned, is the unit of structure. A range of mountains is merely a row of these units hung along a divide, like clothes on a line. The tyro will, however, make this resemblance too literal. Her divide, or water-parting will be a straight line instead of the jagged and sinuous meeting of slopes that a divide invariably is. Her mountains, too, will be all of a size and without any passes between them. And when she first tries to show



Fig. 4- Like clothes on a line.



Fig. 5-A range.



Fig. 6-"Unsatisfactory, disconnected groups."



Fig. 7—An odd mistake. Reverse in color, (black for white).

the passes she will make them at plain level, thus breaking her range up into unsatisfactory, disconnected groups as in Fig. 6. There is in this simple exercise, therefore, room for some practice. The strokes should

not be too uniformly parallel.
They should mix and cross so as to give a general light and shade effect. They should also vary in length, that the mountains may be of different



Fig. 8-"Not right or left but upward."

heights. On comparing Fig. 5 point by point with Figs. 4 and 6, these various criticisms are easily apparent.

An interesting objective in this exercise is to see if you can make the range terminate gradually or dwindle down (Fig. 5), instead of stopping with an abrupt jumping-off place as in Fig. 4.

One odd mistake which nearly every beginner makes is to get the east slope rising from the summit instead of falling. Thus in Fig. 7 the eastern base,

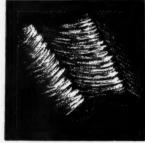


Fig. 9-A valley.

A, is actually higher than the crest, B. To avoid this we have only to keep in mind our original figure, the pyramid, with its vertex pointing, not right or left, but upward. The eastern base will then keep on a level with the western

After your mountain range has a rugged and natural feeling, try a valley by adding an opposing range. The effect of a valley is most readily produced by striking the crayon back and forth with a cradling motion, taking care to have the maximum light in the right place.

We can make this an

We can make this an elevated valley or plateau by making the inner slopes short and the outer ones long, as shown in Fig. 10.

So far we have used only the white crayon. Let us now try the effect of charcoal for the shadows. This may be easily overdone. A little charcoal goes a long way. Only patient experiment is required, however, to make it a valuable adjunct of the blackboard work.



Fig. 10-An elevated valley, or plateau.

Having now a plateau, somewhat conventional in its feeling, let us make it "look natural." A real plateau is a rugged mountain land, usually rimmed by higher mountains. This broken surface is easily pictured by working in smaller ranges, not too uniform and parallel. Finally choose a place that looks likely and put in a lake with your charcoal. Down to this lake and beyond it a





Fig. 11-Value of charcoal.

Fig 12-Shadows overdone.

river may flow, breaking finally thru the coast mountains and reaching the sea. Be careful to make the river taper, beginning with a fine line at the source and ending toward the mouth with a coarser one. The line



Fig 13-A Part of North America.



Fig. 14.

should wriggle, to give the effect of meandering. The river is put in with charcoal after the land surface has been finished. The lake may be represented by the bare board, its contour being cut out by the corner of a blackboard eraser.

If the work has been painstakingly carried to this point we have a fair representation of Southern Mexico. It may be more readily recognizable by adding the Yucatan peninsula and Central America.

This exercise serves as a key to all relief drawing. We have a plain (Yucatan), a valley, a range, a plateau between ranges; also river, lake, coast. An extension of this idea, based upon a careful scrutiny of a textbook map, will yield a satisfactory relief of any geographical area.

It should be said here that the mere copying of a text-book map, with however much fidelity, is not really a strong method of study. A student might produce a remarkably faithful facsimile of the published map and yet be wholly ignorant of the area he has represented. His map, therefore, to be of most value, should not be in a direct sense a copy, but rather a record of what he knows of the area depicted, reinforced and corrected by reference to the text-book map.

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Extinction of the Song Bird.

According to a contributor to a New Orleans paper, the depletion of song birds in that city is creating considerable alarm. Fifteen hundred mocking birds alone will be shipped north this month. The writer adds:

will be shipped north this month. The writer adds:

"Other song birds are annually shipped away from
this section in large numbers, and it will not be long before they have entirely disappeared from the parks and
the forests. The mocking bird is still common enough
to be en sale for a paltry \$2, but his diminishing numbers is apparent in every section of the South. Unless
the authority of the states comes to his protection, the
time is not distant when he will be as much of a curiosity
in his native woods as the buffalo has become in the
West. The mocking bird is a species that will never
die out naturally. He is a hardy little fellow in freedom, and his courage protects him from the other species which inhabit the woods. He is a fighter as game
as the game cock, and can be left to hold his own against
that robber in feathers, the English sparrow, that will
soon spread from the cities to the country and make life
miserable for the denizens of the woods.

"But for all his courage the mocking bird has no protection against the cupidity of man. He is being trapped and sold for a few dimes for shipment to a strange and uncongenial climate, and is even being shot by alleged sportsmen without consciences. The small boy, usually the deadly enemy of all forms of animal life, be it said to his credit, rarely harms singing birds after passing the comparatively harmless knickerbocker age, but the city 'sportsman,' failing to hit birds that are the legitimate prey of sportsmen, is killing singing birds in large numbers. This offence should be made punishable by a fine that would give pause to the conscienceless hunter, and a second offence should be punished by both fine and imprisonment.

"There is, or there is supposed to be, in every state in the South, a law to protect the turkey buzzard. The result is that these birds are so tame as to become the prey of every alleged sportsman armed with a pot metal shotgun. And yet they are not disturbed, because of fear of the law which frequently does not exist. The song birds can be protected as readily if the proper effort be made.'

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The educational news department of THE SCHOOL JOURNAL is to be greatly improved. Suggestions are cordially invited. Educational leaders in all parts of the country will aid the professional advancement of teachers by becoming regular correspondents.

the School Journal,

NEW YORK, CHICAGO, AND BOSTON.

WEEK ENDING AUGUST 23, 1902.

Have Faith in Them!

Every child is an individual revelation of divinity. Herein is contained the substance of the creed which distinguishes this age from the past. Formerly an almost opposite view obtained, outside of mother hearts, at least. To be sure there are children whose divinity is so completely concealed from all but the most skilled eye of faith in humanity, that a doubt as to their heavenly origin and destiny seems justifiable. are, too, educators who are blind in their conceit; blind especially to embryonic good, tho marvelously keen-eyed in fault-finding. The number of people who have failed to become enamored of virtue because of this blindness on the part of their educators is legion. Faith in a child, and the encouraging attitude which springs from this faith, has never marred a single soul. Think of the victories it has won, the souls it has redeemed !

An educator who cultivates a practical faith in every individual child in his care will be doubly rewarded. His influence will inspire and cheer the young on their way, and thousands will call him blessed. The educator himself will be made happier by his faith, and his own character will grow sweeter and stronger thereby.

He who cannot raise himself to this abiding faith in the divine destiny of each child is to be pitied, and his pupils even more than he.

Poor School-Houses.

When the school-house is below the average condition of comfort and elegance exhibited by the houses of the parents of the pupils there is something abnormal and wrong. The estimate of education there is low and unhealthy. Of course the parents are to blame, but, as in a war, when there is a disaster the blame is laid on the leaders, and the leaders in education are the teachers. Practically, if there is a poor school-house in a district or community the teacher is to blame.

There are probably 200,000 school-houses in America, maybe considerably more; we do not have the figures at hand, Dr. W. T. Harris has; but we believe to be justified in asserting that fully one-half of them are mean and ugly buildings, and unfit for the purpose of education. This certainly ought not so to be; we call upon the teachers to arouse out of their apathy and neglect and improve the school-houses. The better the school building the more the teacher will be respected. As a rule a poor building is occupied by a poor teacher. To this there are some exceptions, of course.

When David P. Page undertook to produce good teachers in New York almost every common school-house in the state was a poor one; in the four years he was permitted to live he learned of the erection of over 300 new buildings. Every graduate of the Albany Normal school in those days encouraged the parents to tear down the ugly cheap and unfit structures and replace them by something worthier. This was effected by good teachers. A poor teacher doesn't care what kind of a building he has; he wants the money only. A steady improvement has gone on since Page's day, but still there is an abundance of unfit buildings.

Many years ago two women went into a town in Illinois and opened a private school; the only building they could get was a poor, unpainted forbidding structure. They were real teachers, however, and began to make improvements; they painted the entire house themselves; they planted trees and shrubs and flowers; they apent all the money they could earn and some that they borrowed in beautifying and rendering convenient this

structure, thus dedicating it to educational purposes. Need we say that they made a great success? That building was added to until it is now tenfold larger than the original structure.

Many a young man who is hired to teach a school for a year is not sure he will return the next year and so does nothing in the way of improvement. This is wrong. He should have a committee on school-house improvement composed of the older pupils and some of the parents who may act and carry on the good work when he is gone. We cannot urge too strongly every teacher to do something to beautify and improve the school-house.

The Militarism Tendency.

Is human culture threatened? That a great mental change has taken place, and that our mental attitude is different from what it was respecting the employment of force is apparent to all. Herbert Spencer terms this "rebarbarization," or a reversion to savagery. "In all places and in all ways," he says, "there has been going on during the last twenty years a recrudescence of barbaric ambitions, ideas, and sentiments, and an increasing culture of bloodshed."

This is plainly reflected in current literature. No one of a peaceful tendency but will be shocked to open the pages of the periodicals. The most popular fiction is sanguinary tales. Tales of crime and bloodshed appear in family magazines illustrated to deepen the impression. Under one picture we find, "I took him by the throat and hurled him to the ground." To illustrate this story four pictures of violence were employed. A book written by a young woman, said to be her first attempt, and quite popular, contains numerous scenes of barbaric character; in fact, it fairly reeks with them.

Barbaric character; in fact, it fairly reeks with them.
Rudyard Kipling has become deplorably popular, of whom it is said: "In whose writings one-tenth of nominal Christianity is joined with nine-tenths of real paganism; who idealizes the soldier and glories in the triumph of brute force; and who, in depicting school life, brings to the front the barbarizing activity and feelings, and shows little respect for a civilizing culture."

In an evening paper of wide circulation, supposed to be for quiet perusal in homes, appears one whose object is to glorify scenes of war and bloodshed; it is printed because it accords with the prevalent idea. It is referred to here because it has been copied by a periodical under the title "Pieces to Speak." These lines will give an idea of this strife-inciting piece:

"Come where there's danger and glory,
On the fields where the bullets whine;
We sing the song of the soldier,
And we sing on the firing line."

Tolstoi, in the essay "What is Religion?" discusses this matter at considerable length, holding that the doctrine of evolution is partly to blame for it. It is probable that most of the clergy deplore this tendency, but some have boldly declared that the doctrines of Jesus are not fitted for practical life; the majority, however, think these doctrines may be applied in some future stage when war is not needed.

The thinking teacher finds himself in perplexity. Standing on the Christian basis he says to the pupil who is maltreated: "Do not strike back." The parent standing on the paganic platform says to his son: "Pitch in and give him a good licking." The whole atmosphere, outside of the school and the church, is tainted with savagery and is antagonistic to civilization

It might be supposed that after the lapse of 2,000 years the Christian doctrines would have taken a firmer root; at all events that the bloodshed supposedly needed in the earlier stages of human development was now required no more. But a new outburst of the old

passions is upon us; the Pelee of human carnage is again active. It is explained by some as a rhythmic occurrence in the development process, by which the past reappears, but not in so aggravated a form, and therefore that it is only transitory. If this be the case one may hope we are at the summit of this reversion towards barbarism, and that in twenty years it will have wholly died out.

As a practical matter the teacher is counseled to stand on the Christian platform, and to conduct his school on Christian principles, no matter if the world outside of his school-room is partly pagan. Paganism, barbarism, cruelty, warfare, human slaughter, brute force and violence are certain to give way. The Kingdom of God is sure to come, tho it be delayed on its course.

Religious Instruction in Canadian Schools,

The "Regulations of the Ontario Education Department" contain the following provisions on the subject of religious instruction:—

Every public and high school shall be opened with the Lord's Prayer, and closed with the reading of the Scriptures and the Lord's Prayer, or the prayer authorized by the Department of Education.

The Scriptures shall be read daily and systematically; the portions used may be taken from the book of selections adopted by the department for that purpose, or from the Bible, as the trustees by resolution may direct. Trustees may also order the reading of the Bible or the authorized Scripture selections by both pupils and teachers at the opening and closing of the school, and the repeating of the ten commandments at least once a week.

No pupil shall be required to take part in any religious exercise objected to by his parents or guardians. . . .

The clergy of any denomination, or their authorized representatives, shall have the right to give religious instruction to the pupils of their own church, in each school-house, at least once a week, after the hour of closing the school in the afternoon. . . . Emblems of a denominational character shall not be exhibited in a public school during regular school hours.

Educational Writing.

The graduates of the colleges seem to feel that they can succeed in doing editorial work. As in past years graduates from Yale, Harvard, Cornell, Princeton, and Columbia have presented themselves in search of newspaper work. In reply to the inquiry as to what they would say regarding education they seem to have no doubt they could write extensively and valuably. One, when asked as to his preparation for such work, very naively said, "Why, Iv'e been in an educational institution for the past sixteen years and think I ought to have a great deal to say."

It is one of the calamities of the age that almost everyone has a lot to say upon education and religion. Some years ago the papers in Jersey City discussed the question, "Why do not more people go to church?" One of the most voluminous of the writers on this interesting question was a druggist who confessed that he was too busy in serving out soda water, cigars, etc., on Sunday to attend personally; yet he felt immensely competent to give reasons for the non-attendance of people in general.

To be able to write upon education one should have thought and studied the matter for several years quite industriously; it is a large subject, deep, wide, and high. There are not a great many who can write something worth while on the subject; we wish there were more. We should often be able to give employment to a properly qualified person but such is not to be easily found. Many a man can teach efficiently who is utterly unable to describe his methods. Many a man can write quite brightly on education who would make a very indifferent teacher.

Some years ago a clergyman sold the boarding school he had conducted with much ability for twenty years; wanting some occupation he proposed to furnish THE SCHOOL JOURNAL with articles and laid a few of them

on the editorial table. These articles were so lacking in pith and point that they could not be used—the assistants declared they could not possibly be "licked into shape." We were pained to decline these articles, because we were obliged to say they were not suited to our columns. To his pathetic "Why not?" we could only plead "great pressure on our space." And then we remember one writer in West Virginia who was a genuine prospector for educational ideas, but, as he presented them exceedingly crude they were always valuable and would bear the labor needed to fit them for publication. Our experience with educational writers has been long and varied and we can say that there are few who can write valuably; the reason seems plain to us; they have not thought long and deep as the subject peremptorily requires.

The evening concerts on the public school roof gardens in New York city have scored an immediate success.

Many Cubans expect to be attending schools and colleges in the United States. Parties of these ambitious students are arriving on almost every steamer from Havana. "We expect," said one of them, "sooner or later to become American citizens and we want to equip ourselves with an American education.

The program for the fourteenth volume of *Educational Foundations*, beginning in September, is particularly strong in courses of study that are fundamental. The evident aim is to uplift the teacher and make him professionally efficient by providing the very best and most helpful kind of reading.

The Roman Catholic authorities at Rome are planning to provide religious teaching for the something like five thousand students belonging to the church who are attending secular universities. The suggestion which seems to be gaining in favor is to have the bishops induce the governing bodies of the universities to allow free teachers to meet the students in lecture rooms and furnish instruction in religious subjects.

We have received the delightful news that the women in the sophomore class tried to make a banquet of the freshwomen a failure. The latter were leaving Sage college to attend the banquet when the sophomores set upon them in the dark shrubbery and seized Miss Blatch, the toast mistress, and Miss Paton another speaker; the latter was put in a cab and held prisoner the entire evening. We only refer to this because women have claimed that they could not go to college and study Greek and Latin like men, being thus cruelly deprived of their rights. Must women be merely echoes of men? They said they must have a "college yell" and those who have heard it pronounce it a "squawk;" now they must worry the freshwomen at a banquet—"Just like the Melican man" as the Chinese say. Fudge.

During the coming year Chile will spend about \$4,000,000 gold on her public schools. A very progressive spirit is pervading the country to uplift and develop the public schools of all grades. The population now is about three and one-half millions, and the ratio of school attendance is among the highest in South America.

Minnesota's state school fund now amounts to about \$15,000,000. Only one other state (Texas) has a larger fund. When the state lands are all sold and the proceeds turned into the school fund there will be \$30,000,000 for the support of public education. This with the annual appropriation of \$1,000 to the state high schools puts Minnesota schools on a solid financial footing. Local pride supplies the current funds without hesitation. Three cheers for Minnesota!

Mischievous Charges of "Proselytism."

Secretary of War Elihu Root writes that on July 5 Vice-Governor Wright, the acting governor of the Philippines, was requested to report by cable the facts bearing upon the charge, which has recently been ex-tensively circulated, that official positions in the public school service in the Philippines have been used for proselyting purposes, especial reference being nade to an article which appeared in the Catholic Times.;

Governor Wright replied as follows:

Referring to telegram from your office of 6th instant charges made by Catholic Times unfounded in every essential particular. Untrue that nearly all American teachers are Protestant preachers and proselyters. The fact is one divis-ion superintendent was preaching in the United States a short time, then became teacher. Possibly two or three similar instances among teachers. Bryan, head of normal school, was never clergyman and never occupied a pulpit here or anywhere. There are now two American Catholic teachers in normal school and five in Manila city schools. Native teachers in city, numbering one hundred and forty, all Catholic. Untrue that teachers of normal schools are proselyting and that school graduates only Protestants. Exceptional that that school graduates only Protestants. Exceptional that any graduate is other than Catholic. Untrue Filipino is any graduate is other than Cataonic. Unitrie Finjino is taught that Protestantism bringing enlightenment and Catholicism ignorance and tyranny. No reason to suppose that Stone, superintendent, and Oliver, principal, Manila schools, bigoted or anti-Catholic. Both deny it, also the statement that graduates of Catholic university have been refused place in Manila and sent into the wilderness. Private secretary of Commissioner Moses Catholic, also private secretary of Atkinson, general superintendent of public instruction, also three division superintendents. Have shown your cable to Rev. William D. McKinnon, Catholic priest, a member of the advisory board general instruction, who confirms the state-ment of facts made by me above. Law to inaugurate public school system forbids religious instruction in schools or school buildings by teachers, but allows same three days per week in school buildings by priests or preacher, out of school hours, upon request of parents. (See section 16, act 74) This intended as concession to Catholic sentiment. There are about 3,400 native teachers employed in the islands, all of whom are Catholics. Teachers selected without reference to religion and not allowed to preach or teach religion in schools. No discrimination against Catholic teachers.

Father McKinnon, referred to in this dispatch, is a priest officially connected with the public system and has the most thoro familiarity with the the existing conditions in the Philippines. He was formerly secretary to Archbishop Chappelle, the direct representative of the Holy See in the Philippines.

Secretary Root adds in his letter:

"None of the prelates of the Roman Catholic church, whose duty it is to safeguard the interest of their church, and who are familiar with the facts, have made any such charges as are referred to in the inquiry addressed to Governor Wright, and in his answer above quoted). I am confident that they know better what the true facts are than the unknown and irresponsible sources of these adverse statements.

It is the purpose of the Philippine government to maintain in the archipelago the same kind of free nonsectarian instruction which exists in the United States, and which has proved to be for the interest of religion and all religions. The government means, so far as it possibly can, to give eduration to the people of the islands, and it will do this without discrimnation for or against any church or sect. It does not mean that any officer or teacher of the public school system shall use his position to build up or pull down any church whatever, whether Catholic or Protestant.

"The laws already enacted in the Philippine islands contain the following provisions:

No teacher or other person shall teach or criticise the doctrine of any church, religious sect, or denomination, or shall attempt to influence the pupils for or against any church or religious sect in any public school established under this act. If any teacher shall intentionally violate this section, he or she shall, after due hearing, be dismissed from the public service.

"Conformity to this provision, in the spirit as well as in the letter, will be strictly required. I think the government of the Philippines is entitled to ask that citizens of the United States shall not assume, or believe upon mere rumor and unproved statements, that the government is not in good faith enforcing this law which it has made."

Teachers for the Philippines.

The appointing power is vested in General Supt-Fred. W. Atkinson, at Manila. Those wishing to apply for positions in the Philippine islands should address their communications, together with credentials to him. Those duly appointed are furnished transportation from San Francisco to Manila when the War department is notified of their appointment and acceptance. This transportation does not include subsistence on board the transport, which costs \$1.50 a day for each adult.

In a circular issued by Supt. Atkinson in answer to inquiries about appointments, he states the Department of Education desires to hear only from those who can

meet the following conditions:

Either college or normal graduates.
 Having had several years' successful experience in school work and be now engaged in teaching.
 Copies of testimonials and a late photograph should ac-

company each application.

 Applicants should be physically sound and able to with-stand a tropical climate and willing to accept whatever location may be assigned them by the general superinterdent of education. A certificate of good health from a reliable physician will be required of all appointees.

DUTIES OF THE SUPERINTENDENT.

Supt. Atkinson's duties and powers are stated as fol-

"(a) He shall establish schools in every pueblo in the archipelago, where practicable, and shall reorganize those already established, where such reorganization is necessary.

"(b) He shall appoint—a city superintendent of schools for Manila, and division superintendents of schools for other parts of the archipelago, deputy division superintendents, and the teachers and clerks authorized by law, and shall prescribe the duties of such teachers and clerks."

"(c) He shall fix the salaries of the division superintend-

ents and teachers within the limits established by law.

(d) He shall fix a curriculum for primary, secondary, and other public schools and decide in what tewns secondary schools shall be established."

"(f) He shall prescribe the authority to be exercised by the principal teacher of each school over the other teachers, if any, and his duties in caring for the school-house and school

(i) He shall have the power to determine the towns in which English teachers, to be paid out of the insular treasury

shall teach."

"(m) He shall exercise general supervision over the entire department, and shall prepare and promulgate rules for the examination and determination of the qualifications of applicants for positions of division superintendents and teachers, and for the guidance of the officers and teachers of the department, adapted to carry out this law and not inconsistent with its provisions."

Appointees are required to sign contracts to remain in the Philippine islands as teachers for at least two years, unless sooner released on account of disability or other good reason, of which the general superintendent is the sole judge.

In answer to inquiries as to the climate, Mr. Atkinson writes that it is "a good tropical one." Appointees must be prepared to dispense with all the accustomed luxuries, and even endure hardships while in the isl-The expenses of living are very high in most places. A supply store has been organized under the charge of the Philippines constabulary, with branch stores in the provinces. Teachers are thus enabled to procure supplies more quickly and cheaply than would otherwise be possible. This commissary is not open to teachers in the city of Manila. A civil hospital at Manila is open for the free treatment of all civil employees without charge, except for subsistence, and arrangements are made whereby medical treatment will be given by army surgeons, in the provinces, at a nominal figure.

No more women teachers will be appointed until the conditions as to food, lodgings, and companions are more satisfactory than at present, except that where husband and wife are both qualified as teachers the chances for appointment are better.

Letters.

The Special Teacher.

Blessed is the special teacher who brings sunshine into the room, but woe, woe unto the one who comes as an equinoctial bluster. Like the poor of the New Testament we always have some of the latter kind with us.

One of the weak points of the special teacher as I see it is this. He expects everything to give way to him. His is a thru train of so much importance that everything must be sidetracked in order that he may reach his destination. Perhaps there are many freights on the track loaded down with fruits and vegetables that will spoil if delayed by the way. Due consideration should always be given to those unfortunate ones who are not "special" teachers.

The prudent, conscientious principal always arranges his programs with care, and due regard for the special teacher and the best interest of his school. Many of these teachers come to our schools with the false idea that all they need to know is the subject to be taught and that professional or pedagogical knowledge need only be known by the "common herd"—the grade teacher. Nothing can be farther from the true idea than this.

No principal or superintendent who is making any effort to keep up with the educational procession would recommend for appointment a teacher who does not read educational journals, the best books on teaching, and who does not attend educational meetings.

Things have changed very materially in the last twenty years and we must be up and doing, or out and going. Should less be expected of the special teacher? Should he have less knowledge of the laws and processes by which child life is governed? He comes to the school periodically and expects to accomplish so much! And does he do it? Not unless the regular teacher is in sympathy with his plans. I have thought sometimes he did not know himself what he expected when he entered each room, nor does he have any notion as to what is to be accomplished within the year. In such cases the visits should be like those of angels—"few and far between."

Many of them think that each child in school has the same capacity and adaptability to work that every other child has—consequently each child must excel in each particular teacher's subject. Why should any one expect the same degree of knowledge in music from children who range anywhere from nothing to perfection—if any of us ever reach it—in arithmetic, geography, and grammar? The whole thing is absurd and should be ruled out of court. I know scores of children, and so does every other principal and teacher, who can not sing, especially by themselves, and any amount of scolding and lecturing will not mend the matter. But why are these children to be punished, teased, and tormented about it? It is barbarous and should not be tolerated.

The special teacher should not only have his subject well in hand, but he should knew childhood as no other teacher does. He comes but once or twice at most each week, and maybe not so often; he is only with the class for thirty minutes, with oh, so much to do! His entire time should be spent with the subject in hand. It is his duty to inspire the children with a love for the work, and leave such an impress on the child as will last till he comes again. The grade teacher is not an expert in the subject, she must work out between his visits, and she must get her cues from the special. If he comes in snapping and scolding, criticising and never finding anything good, she will do well to take no cues.

The regular teacher should be the disciplinarian at all times. There are many traits of the children in her room that she knows and can handle better than any other person. Besides, the business of the special is to teach. Sometimes fifteen minutes of his time are spent in lecturing, or criticising the English of some nervous.

excitable child who has unfortunately tripped in the pronunciation of a word. This is no part of his business and if he has not sense enough to know it some one should tell him.

The special subjects are all right in their places, and when properly taught no doubt add much to the accomplishment of the child. Drawing, that gives the child an opportunity to express his own ideas is his strongest language, perhaps. But drawing in which the child is told just how and where, and how long to draw every line is a waste of time, and that special teacher would do the school a kindness to miss most of the recitations. Many times, tho, the teacher may not be so much to blame as the system that is forced upon him by an ignorant school board.

German as it is taught in many of our schools is worse than a waste of time, and the amount of scolding and nagging that is done to get children over the allotted ground is enough to ruin the sweetest dispositioned child in school. Most teachers of this subject in our public schools know nothing of modern methods of teaching, but cling to the old gradgrind methods of the long agone. Why not stop it and teach the subject rationally or not at all.

All special teachers are not possessed with the one idea that theirs is the only subject and that the work is poorly done by the grade teacher. It is my good fortune to know many specials who always bring sunshine what a joy it is to hear such remarks as the following from the children: "I came early this morning, for Miss D— will be here for writing." "Oh, I am so glad it is Monday, for the teacher in physical culture is coming." When the superintendent of a special department comes on his tour of inspection, to see the children go trooping out to meet him disperses the gloom of all our past annoyances. As he lays his hand on a little head and caresses the little deformed one, we conclude there is good in the world and that all specials are not Blue Beards. Well that it is so, or many of us would grow gray long before the time allotted. To have these teachers come to the principal's office and speak kindly of the grade teacher, to tell in a right spirit of her failures as well as her successes, and to suggest where she can improve, to speak well of the efforts of the pupils in the grades; their efforts and successes; these are the things that lead us to retract most we have sometimes said of the specials. The first class should be retired, and the last retained for the sunshine they distribute.

Cincinnati, Ohio.

(When Mr. Andrew addressed this letter to The School Journal he was principal of the Linwood school; since then he has become an assistant superintendent in Cincinnati, a promotion of which he is eminently (deserving.—Ed.)

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Real Value of a Liberal Education.

It is not so much tools and methods adapted to specific success that a university man draws from the academic armory; it is rather a broad conception of human endeavor and achievement, a lofty and far-ranging point of view. It is not even intellectual stimulation so much as intellectual elevation and social orientation that he owes to a college atmosphere. That medium, no doubt, has its own reflections and refractions; they are not such, however, as either to cramp or delude the vision; the right adjustments are easily supplied.

The value of concentration, considered as an engine of accomplishment, is appreciated in a college as it is in a counting-house or factory; but the merit of concentration is graduated by more standards than one, and is not measured exclusively by the size of a bank account. In the horizon of universities there is room for larger philosophies than the economic system which contracts its scrutiny to the sgencies which assure the financial welfare of individuals; or, at widest, the wealth of nations. Speculations, discoveries, inventions are prosecuted and acclaimed, but without any absorbing atten-

tion to their commercial applicabilities. A new star in the firmament is registered without any heed to the query whether a wagon can be hitched to it. It is in this vital particular, detachment from the pecuniary aspect of things, that the college microcosm differs

sharply from the outside world.

From the hour when he enters a university until the hour he leaves it, the undergraduate undergoes a kind of purification and sublimation such as used to be imposed on candidates for initiation into the Greek mysteries. Gradually, insensibly, but surely, is borne in upon him with the air he breathes-as he marks the plain living and high thinking of the men who are placed above him to educate by teaching and examplethe fundamental and illuminating truth, a truth learned less fully or less quickly by those who are plunged when young into commercial or professional life, the truth that what we call civilization, which has trained man to look skyward instead of earthward, is the product of no sensual craving to slake individual appetite, but of human energy exerted in a thousand various ways, some disinterested, some self-seeking, but all useful in their degree, tho, of all channels known to human energy, that which makes money-getting in itself an end is the least elevating, the least refining, and, as a rule, the least beneficent.

M. W. HAZLETINE.

The Country Teacher's Duty.

While we in the city are endeavoring to impress on the minds of the boys that it is a nice thing to live in the country, others are telling the boys of the country how nice it is to live in the city. Here is the story of a boy that came into New York city lately and was picked up by the Children's Aid Society:

"I'm thirteen years old an' I haint never been away from the farm before. I haint got any paw nor maw; they're both dead. Paw, he went away to the war in Cubia when I was We lived in Geneva then, an' I took keer o' the place. But my paw, he never come back from the war. He wuz in the charge at San Juan Hill, maw said, and got shot dead. I guess he wuz a hero.
too; it was great.
"May sorred to forgit all." I'd like to a' been a soldier,

"Maw seemed to forgit all 'bout paw long 'fore the war was over 'cause she turned round and married Jim Smith. But maw died soon and I was left with Jim. Jim didn't keer much bout me. He wanted me to be a chimley sweep; I wanted to grow up an' go to the Hobart college, in Geneva, an' learn an' be a great man. Jim put me on a farm with Mr. Martin, at Fairport. I used to get up with the sun an take the casws to pasture. Then I did chores and then I went to school.

Learned a hull pile in that school.
"Mr. Martin said I was a good worker, an' I'd be healthy, wealthy, an' wise. Then Jim took me off the farm to Utica, Syracuse, an' Rochester to clean the chimleys in all them places. Finally Jim met another woman an' he says to me places. Finally Jim met another woman an ne says to me 'Well, kid, yer pretty strong an' able to shift for yerself now, an' so you better hustle along for yerself from now. I can't

pay for yer grub an' bed no more.

I went to Utica, Syracuse, an' all the other places to get a job an' get up in the world—but they said I was too small to work. A cop in Buffalo told me that New York was the only place to rise, so I hid on a coal car an' rode all the way thru without stop. I was hungry when I got here an'the rain froze me; Mr. Diamond was good to me. Now I'm ready to work. I wanter learn an' get rich. I'm strong an' able an' want a chance.'

This city has thousands of young men in it who have left the farm and who "want to get rich" and who have hard times here.

The tendency to the city should be combated by the country teachers. They should not tell the boys that one can come to the city with twenty-five cents in his pocket and make twenty-five millions. They should try to make the country a pleasant place to live in by setting various things in operation that an intelligent man can devise. We have in mind one teacher who headed a debating society, a musical association, assisted in Christian Endeavor, and had monthly entertainments in his school. That community felt his influence and was

made happy

In conclusion I would add that while the country teacher may not get as great wages as we in the city get he can accomplish a great deal that we cannot, and that is worth considering. J. D. HASTEAD.

A Curious Thing.

Curious things happen in the educational world; here is one of them. A school principal after a long and valuable service in a somewhat conspicuous position retired, and THE JOURNAL naturally and rightly asked for materials to make a suitable notice of the event. It was as important an event in the principal's world as the marriage of Chauncey Depew in the social world. But mark how this man looked at it: "It is an affair of little consequence and not worthy of occupying any space in your paper."

It is this indifference to the world in which the teacher toils that prevents teaching from being a profession, which dooms nine-tenths of those laboring in it

to receive a mere pittance for their services.

We do not know whether this man ever subscribed to an educational paper; the probabilities are that he did not; lacking faith in himself he doubtless lacked faith in what an educational paper stands for. This man probably had merely reached the mechanical stage of teaching; he had not yet chipped the shell; he had absorbed a certain amount of information; he had learned how "to run a school" and there he stuck like a wagon in the mud. Such men ache in every bone to get out of teaching into something that has more money in it.

In a recognized profession, if a man leaves it he wants, if he has a standing, to have his world see him "retire in good order. But the teachers are willing to fold

their tents like the Arabs.

The Religious Trouble.

It is more than a half century since the religious question was settled as pertains to public schools in this country. Before that time the sect that was in power allowed or required its special religion to be taught; but soon all the sects were sending to the public school and the demand came that no special kind of religion be taught, for all sects were taxed to support the schools. It was hard for many not to see the Bible opened when the school was begun, but it was gradually conceded that religion must not be taught in the public school.

The question has been settled and the common ground found. A Catholic and a Protestant clergyman some years ago were traveling in a stage over Western prairies. The Protestant soon attacked the Catholic who replied mildly and courteously; but the Protestant went on. When he paused the Catholic said, "You have shown that we disagree in some things; why not show those in which we agree; I think there is much common ground." This ended the discussion. So it was found fifty years ago there was a common ground for the children of all sects in the public schools and that was the common branches of learning. This throws the responsibility of teaching religion on the parent and clergyman.

In a certain town a Protestant clergyman was wont to preach annually against the removal of the Bible from the schools, claiming it was caused by Catholics. In that town were two private schools; in one the Bible was not employed at all, in the other it was read from and prayer offered; the teacher of the latter was an active worker in this clergyman's church. Wishing to have his son prepared for college the clergyman sent him to
—which of these? To the one where the Bible was not used. and defended his action by saying that "Mr. B. is the better teacher." In other words this man declared that he sent his son to school to be taught secular knowledge.

Professor Turner on Astronomy.

Modern Astronomy. Being some account of the evolution of the last quarter of a century. By Herbert Hall Turner, F. R. S. (Savinan Professor of Astronomy and Fellow of New College in the University of Oxford): Published by E. P. Dutton & Company, New York.

Modern astronomy is a valuable book, clearly and brightly written, and illustrated by a number of valuable diagrams and photographs. The book is divided into four sections, comprising an account of modern instruments, modern methods, modern results, and modern mathematical astronomy.

The author traces in an interesting way, the growth of astronomy during the last quarter of a century, from 1875 when astronomers had a vague feeling that the methods of astronomical work had reached something like finality and had settled down into what ill-natured critics might have termed "a gentle drowsiness," to the present time when the spectroscope and photographic dry plate have revealed the fact that we are, as it were, merely on the borderland of this science, as far as our knowledge of its truths are concerned.

Could Sir William Herschel have known what astronomers do now, about charting the star-depths how many hours of labor would he have saved, for in his day the work was visual and the old-fashiened way of making star-charts was by plotting the results of zone observations. At present, this work is accomplished by means of photography, a method which is vastly better and more rapid. In 1889, eighteen different observatories made arrangements to secure a photographic chart of all the stars down to the fourteenth magnitude, and the work is now fully three-fourths done.

With a good instrument there appears to be no limit to the faintness of the stars that can be photographed, and with the ordinary plates and exposure times not exceeding twenty minutes, it is now possible to get distinct impressions of stars that the eye cannot possibly see with the telescope employed. As the author states, in the second section of his book : most valuable outcome of the enterprise has been the demonstration of the rapidity and ease with which stellar positions can be determined by measures on photographic plates. an instance in point, the Cambridge catalog of stars, published a few years ago, gives the positions of fourteen thousand stars in a certain narrow belt of the heavens. This represents twenty years' work of two people with the transit circle. It falls to our lot to explore the same belt of the heavens by photography. We shall, perhaps, have six people at Oxford, but to give a simpler comparison, I will divide their work by three. With a staff equal to Cambridge we shall, in five or six years, obtain photographically the places of two or three times as many stars; in other words, the work is done five or six times as quickly, and the results are even more accurate."

New instruments which have been placed in the hands of astronomers and the new methods which they have suggested, have naturally led to new discoveries; the most important being referred to by the author in the third section of his book. He gives as the first instance, Dr. Chandler's discovery of the movements of the poles on the surface of the earth, or the "variation of latitude" as it is technically called. The discovery was largely due to Dr. Chandler's observations with the almucantar, an instrument described in the first section of

"The question, Does the latitude of a given place vary? or, in other words, Does the North Pole, which our explorers go to seek. remain accurately in the same place on the earth's surface? has been before the minds of astronomers for a long time. It was soon recognized that if the North Pole does not remain quite stationary, its excursions are very small. It never wanders down into Europe, for instance, or we should have a different climate; its excursions cannot carry it very far on the way towards Europe, or the length of day and night would be sensibly affected."

Apparently after several attempts made to determine whether the North Pole had even a slight "wabble," astronomers came to the conclusion that the question must be answered in the negative. "So confident did astronomers feel on this point that when Dr. Chandler, who ultimately demonstrated the real facts so clearly, found an apparent movement of the Pole by observations with the almucantar in 1885, he himself thought he must have made some mistake, and did not follow up the matter." However, Dr. Chandler succeeded in solving the problem later, and his theory is now generally accepted.

As Professor Turner remarks: "The earth is not rigid; and when allowance is made for its yielding to stress, we see that ten months is merely the minimum period in which it can

wabble. The amount of wabble is very small. The North Pole is never a dozen yards away from its mean position; and its movements might almost be executed on the floor of the lecture hall at the Royal Institution, London. There will thus not be any serious difficulty in identifying the spot if any of our brave explorers penetrate to the North Pole. To the dangers from cold and hunger there will not be added the mortification of finding, when the supposed North Pole is reached, that it has removed for the season to another locality; but at the same time its movements affect astronomical observations quite sensibly, and must be taken account of in the future."

The last section of the book deals in an entertaining manner, with an account of the planetary theory, forms of the planets, the history of the earth and moon, and a lucid explanation of the famous tidal theory advanced by Professor G. H. Darwin in his book on "The Tides."

From the first page to the last, the author has succeeded in making an abstruse subject entertaining for all who have even the most most moderate knowledge of astronomy. As he remarks in the preface: "I would represent myself as conducting a party of visitors over an establishment where large additions and improvements have recently been made; not stopping to examine everything and perhaps dwelling unduly over things with which I am personally most familiar." The book owes its origin to three lectures given at the Royal Institution, London, in February, 1900; but what was then said has been amplified, and brought up to date.

MARY PROCTOR.

Lyman Abbott's Lowell Lectures.

The Rights of Man. A Study in Twentieth Century Problems, by Lyman Abbott.

Dr. Abbott gave a series of twelve lectures before the Lowell institute, Boston, in the winter of 1890 91. They were not written, but were taken down stenographically and carefully revised to make the present volume.

The lecturer first showed that the conflict between imperialism, or the rule of the will of one, and republicanism, or the rule of the will of the many, has been continuous from early ages until now. In the time of Jesus of Nazareth, the Roman nation represented one, and the Hebrew people the other. Rome temporarily triumphed; but now, the idea of the rule of the many is in the ascendant. In subsequent lectures, the distinctions between rights and privileges, between liberty and license, are clearly shown. Then natural rights belonging to the individual necessarily follow, of which the right to life, to freedom of action, to the free family life, and to acquire property, are the most important. Political rights differ from these natural rights in that they imply the existence of the state. Hence government exists for the good of the individual, not the individual for the government, and this makes the republican idea.

Later, some of the peculiar domestic problems of this country are treated. Fundamentally, the primary purpose of our national life is the development of personal character, and all these problems must be solved with this at the fore. Among these are the Indian problem a problem of the overthrow of barbarism by civilization: the negro problem, a problem of the assimilation of distinct races: the problem of the political status of woman, to be determined upon expediency: the problem of the political boss, to be determined by the future evolution of the government, and the problem of labor. This can find its solution only in the acceptance of the principle of universal brotherhood.

After pointing out some of the perils to which this country is specially exposed as the most important representative of democracy, the lecturer concludes that the hope for the future is to be found in a steady growth in religious and Christian fellowship among the people. That is, the future is to be an evolution along the best lines, for which the struggle against the evil is a necessary element. The book is calculated to help all students of present conditions to right estimates of their relations and to encourage hopefulness for coming years. (Houghton, Mifflin & Co., Boston and New York. Price \$1.50 net.)

A teacher having had college training or its equivalent and who is a ready writer and would like to work in the journalistic field of education, may be interested in a position offered thru the editor of The School Journal. Living salary at beginning. The right person can develop into an excellent position. Address, giving full particulars, also stating minimum salary expected, to "Editor of The School Journal, 61 E. 9th street, New York.

The Educational Outlook.

Agriculture in Rural Schools.

The interesting and valuable report on the Rural Schools of Northwest France, prepared by Mr. Cloudsley Brereton, for the English education department, contains some very suggestive comments on the methods and success of agricultural teaching. The French have handled this difficult problem with consummate skill, and have set an example that is well worth careful study. As early as 1897 the teaching of agriculture in the rural schools was made compulsory. France is a land of small holdings. In some communes of small holdings. In some communes one person out of four is a proprietor, and therefore the pick of the village schools are the sons of peasants who, having helped their fathers on their holdings, are more or less au fait with farm work. Most of the scholars will one day have a strip of land of their own, and so have a strip of land of their own, and so have a life interest in the concern, and they might laugh at the master who should attempt to teach agriculture with-out a manual. On the other hand, the majority of rural masters are recruited from the peasant class, and come to the schools equipped with a good working knowledge of the subject. Moreover, their salaries do not depend on the locality of salaries do not depend on the locality of their school, but on their own qualifica-tions and work. A country teacher is as well paid, cateris paribus, as those in the towns, and so has not the same induce-ments as our own teachers to leave the country. The French rural schools thus have in this respect a decided advantage over our own. over our own.

Among the many schools visited by Mr. Brereton, he found no fewer than six different conceptions of agricultural education. The somewhat too ambitious scheme of 1897 has had to be modified in many places. It has now been proposed that only simple object lessons should be given in the most elementary grades; for the intermediate classes that there should be more object lessons, reading lessons, school walks for nature study, with a graduated course of instruction on animals, plants, soils, etc., according to the seasons of the year. In the higher course, rarely organized in rural schools, the hygiene of ani-mals and men, a little vegetable physiology, the chemistry of manures, with practical experiments, are prescribed.

Much is being done in giving children an insight into the reasons of agricultural an insight into the reasons of agricultural operations, in cultivating their powers of observation, and so increasing their love for the country and for country life, by systematic and effective work. School gardens and "champs d'experience," or small "experimental farms" are being largely used for practical demonstration of the value of certain manures and the choice of seeds, as well as improved choice of seeds, as well as improved methods of grafting trees and vines, etc. In some places excursions are arranged, during which the pupils make rough notes of the teacher's explanations and of their own observations. From these they afterown observations. From these they after-wards write essays or relate orally what they have heard and seen. At St. Aubin's (Calvados) the scholars form a botanical garden with the plants they have collected. The garden is divided into plots for the principal "families," and each new find is set in the bed assigned to the genus. In one place a campaign has been organized against cockchafers, a terrible pest in one place a campaign has been organized against cockchafers, a terrible pest in their district, and the children are paid the munificent sum of two sous a kilo for what they can collect. A plan has been adopted, with a fair amount of success, in

agriculture in the secondary schools as in schools, 1,367 teachers, 77,164 pupils and agriculture in the secondary schools as in schools, I,367 teachers, 77,164 pupils and the primary. He puts it with character- an expenditure of \$1,092,970, or \$15.16 per istic force that "we must not only educate capita. At that time there were often Hodge, but his master." However, he several schools in the same building, a warns us that we must not expect too practice that is now replaced wherever much from the schools. They can only possible by combination under a supergive at the most aptitudes and aspirations vising principal.

So far, so good. But Philadelphia has find on leaving school a fair field for their not yet learned to provide properly for all aptitudes and aspirations, at home. the the children asking for admission to the aptitudes and aspirations at home, the best of them will leave the villages, and the agricultural bias will be simply thrown away.

Boers to Study Agriculture.

LONDON.—The British government has decided to select a number of prominent Boer farmers and to send them to Canada, Australia, and New Zealand, in order to study modern scientific methods of agri-culture. The scheme was under way with was declared, but was then deferred. Meanwhile every effort is being made to bring home as quickly as a page to regard to the Boer prisoners before bring home as quickly as possible the prisoners still at St. Helena, Bermuda, and Ceylon, and it is hoped that all will have been brought home by November.

hool for Cotton Mill Operatives.

CHARLOTTE, N. C.—For several years the Rev. J. A. Baldwin, of this city, has been quietly working up a plan for the founding of a school for the industrial and literary training of cotton mill operative The scheme has now assumed definite shape in the organization of the Piedmont Industrial school. The plan is to have the students spend a part of their time in a cotton mill to be operated in connection with the school, and for their labor receive

a stated amount as pay.

While a definite location for the school has not been decided upon, it is intended, if possible, to have the school located at some point near Charlotte.

Japanese University for Women.

In 1901 there were completed in Tokio. Japan, buildings costing 50,000, to be used as a university exclusively for women. This university now has 550 pupils and forty-six professors and instructors. partments of Japanese and English literature and domestic science are included in the curriculum.

Music Teacher Honored.

ROME.—The Italian government has offered to Professor Tirindelli, director of the Cincinnati conservatory of music, the directorship of the great Venice conserv-atory of music. Professor Tirindelli, however, is under contract with the Cincinnati conservatory for a term of years, which may prevent his immediate acceptance of the Italian offer.

hiladelphia School Statistics.

PHILADELPHIA.—At the close of June term there were 328 school buildings owned or occupied for public educational purposes, and at the beginning of the year they were attended by 152,889 children. The cost of educating each was \$23.15, and the total appropriations by the state and municipal authorities amounted to \$4,203,277.61. To educate the army of \$4,203,277.61. To educate the army of little ones 3,650 teachers and principals were required.

Looking back over the history of the past it is found that in 1818, when the their district, and the children are paid past it is found that in 1818, when the the munificent sum of two sous a kilo for what they can collect. A plan has been Philadelphia, there were six schools, 18 adopted, with a fair amount of success, in teachers, 2,845, pupils, while the cost per most departments, of holding examinations capita was \$3.57 and the total appropriation agriculture, and giving prizes for the best answers, as well as to the masters who have taught the successful pupils.

Mr. Brereton suggests that it is quite as important for Anglo-Saxons to take up as tit is found that in 1818, when the public school system was organized in 1818, when the public school system was organized in 1818, when the public school system was organized in 1818, when the two are public school system was organized in 2,3045. Pupils, while the cost per most departments, of holding examinations \$23,049. Twenty years later the number of schools had increased to 167, who have taught the successful pupils.

Mr. Brereton suggests that it is quite as into 1818,741. In 1867, there were 382

r, he several schools in the same building, a too practice that is now replaced wherever only possible by combination under a superious vising principal.

not So far, so good. But Philadelphia has their not yet learned to provide properly for all the children asking for admission to the and schools. Last May there were 9,492 nply children not properly accommodated. Of these, 5,396 were on half times, 3,017 in double classes, and 239 on the waiting list—that is, could not be admitted. It is stated that in September this number will stated that in September this number will probably be largely increased, notwithstanding the assurance that four new buildings and two additions will be ready for occupancy.

Princeton Men Set Back.

Over a half hundred students, representing the incoming sophomore, junior, and senior classes, have been dropped to lower classes. At least a dozen athletes, several of whom are prominent in football, baseball and track, are among the number. Probably not in the history of Princeton have so many students been relegated to lower classes at the end of any term.

New Maps of the United States.

WASHINGTON, D. C.—The director of the United States Geological Survey has seventy parties in the field, conducting surveys and securing the necessary data for maps of different sections of thirty-three states and territories. At the close of the field season, this material will be embodied in about one hundred topographic maps, representing approximately 32,000 square miles of country, an area nearly as large as that of New England nearly as large as that of New England without the state of Maine. The surveys are made with great care, and the resulting maps are models of the cartographer's art in beauty of finish and precision and accuracy of detail. One of the interesting and useful features of these maps is their expression of the relief or contour of the surface. To accomplish this, lines are drawn thru points of equal elevation at regular intervals of ten. twenty, fifty, or one hundred feet, according as ty, fity, or one hundred feet, according as the country is flat or rugged, and from these lines, known as "contours," it is possible, by noting whether they lie near together or distant on the map, to read clearly the shapes and slopes of the hills, the extent of the valleys, and their altitude above sea level. This feature greatly adds to their value for those to whom an accurate knowledge of the topography is of importance. of importance.

For the convenience of those desiring detailed information regarding its maps, the Geological Survey distributes, on application, small index sheets or folders, for the different states, which show, by a system of small rectangles stamped on a key map, the exact territory surveyed and mapped on each, and also the scale of miles, the names, area, and other facts of interest connected with the published maps.

Extravagance to be Stopped.

Hereafter all requisitions of Chicago school principals for pens, pencils, ink, and paper will have to be endorsed by Super-intendent Cooley before they can be hon-

ored at the supply house.

Mr. Cooley told the committee that he had asked the principals to give him idea of the needs of the schools. principal figured that he needed forty two pencils per pupil, while another only needed two. The same ratio obtained with regard to pens and paper. Hence

Teachers' Lot in England.

An English writer discussing the oppor-tunities of educated women in the pro-fessions in his country, says that most of the women graduates of the universities the women graduates of the universities go into secretaryships or teaching. For the former they need to know German, French, Italian, stenography and typewriting, and \$500 a year is the average salary. But, the writer says, the girl who secures a post as secretary is as a rule to be envied, compared to the fate that awaits her as a teacher. The "work is trying, the pay poor, and the narrow-mindedness that surrounds it pitiable." In proof, he instances the fact that a teacher in a high school was asked to resign because a play of hers had been acted, and in consequence her picture had been published in several of the papers. been published in several of the papers.

Intemperance in Germany.

Intemperance in Germany.

BERLIN, GERMANY.—Count Douglas, a descendant of a Scotch soldier of fortune, has proposed a resolution in the Prussian Diet, asking the ministry to bring in a bill imposing more rigid restrictions on the liquor traffic. The resolution set forth that great injury is inflicted in Germany by excessive indulgence in drink. The Germans spend 3,000,000,000,000 marks (\$750,000,000) a year in drink, twice the amount of the army and navy budgets: and 180,000 persons were navy budgets; and 180,000 persons were brought before the courts thru drink. The number of criminals are increasing 10,000 annually, and the number of con-victed persons has increased from 299,249, in 1882, to 478,139, in 1899. In the insane asylums intemperance furnishes thirty per

asylums intemperance furnishes thirty per cent. of the inmates, and eighty per cent. of Germany's idiots are the children of intemperate people. The loss to industry, thru excessive drinking, is incalculable.

Germany, while leading the world in social reform legislation, has done practically nothing against drinking. The United States, Count Douglas points out, is far more advanced than Germany in this respect. He condemns the drinking cult in the universities, saying that while it is a jolly life while it lasts, it has many tragical sequels.

tragical sequels.
Dr. Endemann asserts that alcoholists Dr. Endemann asserts that alcoholists succumb to the tubercle bacillus much easier than others, and Dr. Mertens says the mortality in all diseases is three or four times greater in the case of alcoholists than among abstainers, comparing persons of equal physical strength.

Educational New England.

NEWPORT, R. I.—Mr. Arthur F. Griffiths, a teacher in St. George's school, has been elected president of Oahu college, and Latin in the high school. She is a Honolulu. This is the leading educational resident of Dorchester and a graduate of institution of Hawaii, has an endowment of half a million, with thirty teachers and five hundred students. President Griffiths is a resident of Richville, N. Y., and he was educated at Harvard university.

DANVERS, MASS.—Miss Josephine A. White has been elected teacher of Greek and Latin in the high school. She is a resident of Dorchester and a graduate of Chester, N. H., will teach modern languages.

SANDERSON, MASS.—Mr. Morton C. Sturtevant, a graduate of Tuft's ('99), and

KINGSTON, R. I.—President Ernest R. Nichols, of the Kansas State Agricultural college, has been elected president of the Rhode Island College of Agriculture and the Mechanic Arts.

FALL RIVER, MASS.—Mr. Charles C. Ramsey, principal of the M. B. C. Durfee high school, has resigned to enter business. He is reported to have accepted an offer in Colorado.

WALTHAM, Mass.-A complete organization of the Swedenborgian school here has been decided upon. Rev. Benjamin Worcester, for many years at the head, will retire, and the committee are looking for a suitable successor.

Principal Albert Candlin, of the South grammar school, has had the principalship of the Stearns school added to his present duties. The two schools are close together.

Miss Elizabeth Ryan has resigned the principalship of the Plympton school, and will go to Kenosha, Wis., as teacher of elocution.

Monson, Mass.—Mr. Frederick A. Wheeler, superintendent of the graded schools, Fairhaven, Vt., has been elected superintendent of schools for the two superintendent of schools for the two towns of Brimfield and Monson. He was graduated from the university of Vermont in 1893, and then taught in Bun and Burton seminary at Manchester, Vt., and later at Proctor. For the past six years he has held the double position of principal of the high school and superintendent at Egitheren Fairhaven.

BOSTON—Dr. Pierson S. Page, director of the physical training in the Y. M. C. A. for the past three years, has been elected physical director in Phillips academy, Andover. The new gymnasium of the academy cost \$40,000, and has a full equipment in all lines of athletics. Dr. Page will have charge also of the new Brother's field which have been fitted out. Brothers' field, which has been fitted out at an expense of \$10,000.

Sturtevant, a graduate of Tuft's ('99), and for two years a teacher in the Stoneham high school, has been elected principal of Sanderson academy, to succeed Mr. Fredwick C. Harman erick C. Hosmer.

WORCESTER, MASS .- Mr. Lee Russell for the past two years teacher of chemistry and mineralogy in the Provincial normal school, Truro, N. S., has been appointed teacher of the same branches in the state normal school. He is the eldest son of the principal, E. Harlow Russell; took his degree of B. S. at the Worcester Poly-technic institute in 1890, and has been a teacher since. For one year he assisted Prof. George I. Alden at the institute, in There he organized a system of manual training in the public schools of Halifax, N. S.

WATERVILLE, ME.—Miss Grace E. Berry, of Worcester, Mass., has been elected dean of the woman's department of Colby college. She is a graduate of Mt. Holyoke college ('93), and took her master's degree in '99. She has taught in Western college, Oxford, O., and in the department of physics at Mt. Hol-

AUBURN, ME .- Mr. Herbert E. Congdon, who has been the principal of a business college at Brockton, Mass., has become instructor in the new commercial course in the Edward Little high school.

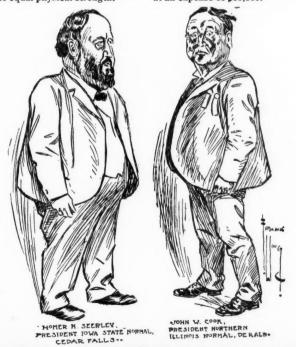
EXETER, N. H.—Mr. G. Percy Re-Chadwick, a son of Mr. J. W. Chadwick master in the Boston Latin school, has been elected instructor in history in Phillips Exeter academy, to succeed Dr. G. A. Williams, who has become professor of Greek in Kalamazoo college. Mr. Chadwick is a graduate of Harvard, class of '02. of 'oz.

WATERVILLE, MAINE.—Mr. C. H. White, of Worcester, Miss., has been been elected professor of Greek in Colby college. He is a graduate of Amherst college.

Mr. L. R Moore, of the Massachusetts Institute of Technology, has been ap-pointed Instructor in Science.

Hyannis Summer School.

The five weeks' summer session of the State Normal school at Hyannis, Mass., had by far the largest attendance since the inauguration of the work in 1898. At least inauguration of the work in 1898. At least ten different states were represented and a large percentage of the students were graduates of colleges and other normal schools, many of them superintendents, normal school teachers, and principals of schools. The class in industrial training was particularly strong. Each teacher in this class was given a garden to care in this class was given a garden to care for during the five weeks and each was expected to make a hammock, different kinds of baskets, a hat and other things. Classes of children were in attendance and much attention was given to the proper correlation of this with the older forms of school work. Lectures and discussions were given by Principal Baldwin and the instructors on the necessity for some form of industrial experience as a basis for the or industrial experience as a basis for the proper study of language, arithmetic, geography, and other subjects. These have been open to the general student body and have been much appreciated. The course in supervision inaugurated last year and the other courses of the school have been very inspiring and the schools of the state are sure to be greatly benefited as a result of the summer work of this school. of the summer work of this school.



Two well-known normal school presidents as seen by a newspaper cartoonist at the Minneapolis convention.

In and Around New York City.

The summer school of Columbia university enrolled this year 643 students, 391 of whom were women.

Supreme Court Justice Gaynor, of Brooklyn, has denied the application of a parent for a mandamus to compel the board of education of Queens to admit his son into a public school without requiring him to be vaccinated. Justice Gaynor

"The state law excluding children from the common schools until they are vac-cinated is a health law within the power of the legislature to pass.

The advancement of William H. Smith recognition of years of devotion and efficient service to the school system of New York. This promotion should have New York. This promotion should have come to him years since, and the long delay is not to the credit of the city. But it is well that he is finally installed. His excellent work, both in his regular school and as principal of vacation school No. 35, was described in these columns last year. This summer his success at Christie street was even greater than in previous summers. The handicraft training has won unstinted praise from all visitors to summers. his school.

Scholarships have been awarded to the following who passed in the June entrance examinations for Columbia college:

Alumni competitive scholarship-

Alumni competitive schoolarship—G. 1.
Hirsch, Park avenue school.
Hewitt or Harper scholarship—Max
Kahn, De Witt Clinton High school.
Brooklyn scholarships—W. L. Caswell,
Brooklyn High school; H. W. Eastman,
Polytechnic Institute; L. F. Schiff, Brooklyn High school. lyn High school.

A Triumph of Our Schools.

The New York World recently printed the story of an act of self-denial on the part of a school boy in New York city, which ought to be told in every school in

Master Sidney Bernheim, at the graduating exercises of the De Witt Clinton high school, received a bouquet instead of a scholarship in New York university. Master Bernheim stepped aside from scholarship honors that a free college course may go to a fellow pupil less able than he to pay his way. In this act of self-denial there is a boy's

personal triumph of the good heart. In a broader way there is the triumph and the justification, if one were needed, of our system of democratic education.

Children's Eyes Diseased.

At the meeting of the board of educasion held on July 30 considerable discussion was called forth by the report of Health Commissioner Lederle on the health of the public school children. Mr. Lederle said :

"A few weeks ago, in order to learn the extent of this disease in the schools of Manhattan, I appointed twelve eye specialists to go as far as they could in the fort-night of the school year then remaining. night of the school year then remaining. They examined 55,470 children in thirty-six schools, and I am sure you will be sur. prised and shocked, as I was, to learn that no less than 6,670, or a percentage of 12 per cent. exhibited contagious eye diseases. Of these 6,670, 2,328 were of the severest type of trachoma, necessitating almost immediate operation.

Supt. Maxwell thought the report must

Supt. Maxwell thought the report must be exaggerated. He added that he had been informed that the health board phybeen informed that the health board one sicians had, in their work, examined one child after another without taking suffi-cient care to disinfect their hands. This, he said, was a sure way to spread the disease if any existed.

Students Want to do Housework.

Students at Columbia who must earn their way thru college, and find the usual scholastic fields over supplied, have hit upon new lines of employment in housework, such as attending to furnaces, cleanwork, such as attending to furnaces, cleaning house, serving at table, washing dishes, running errands and caring for horses. They are willing to do any other odd job that may arise in connection with these duties. The secretary of the committee on employment, Mr. Reuben A. Meyers, has issued a circular announcing all this and adding: "Should you be considering the employment of any one for work such as is indicated above I shall be pleased to send several students to be work such as is indicated above I shall be pleased to send several students to be interviewed by you when they come to the university in the fall. If you do not see your way clear to employ one yourself, I shall be grateful for the name of any person, janitor or real estate agent who might have need of such an assistant."

The Study of Geography.

City Superintendent William H. Maxwell has recently announced the details in reference to the general requirements in each of the several subjects of the elementary curriculum, those in geography being as follows:

"I. Mastery of a school text-book. Do on the misunderstand this. We do not mean by this that the pupil is to learn the geography text. We do not mean, in particular, that he is to memorize long lists of rivers, mountains, towns, and capes, etc. We do not attach very much importance to that. We do attach importance, howto that. We do attach importance, how-ever, to 'the human side of geography, to learn of the earth as man's home. This includes the reciprocal influence of phys-ical conditions on man and of man in utilizing physical conditions. It is to the getting from these matters that concern

men to which we refer particularly.

2. Knowledge of the important physical features of the continents, of the United States, of New York state. This requires no comment.

3. Power to locate the chief countries of the world, their great cities and foreign possessions, and to give and recognize their chief productions. We believe that if a child is shown a sample of wheat he Power to locate the chief countries should be able to identify it and tell some-thing of its production. The same should thing of its production. The same should be the rule with coal, wood, and similar staples.

Knowledge of the chief transcontin-l and ocean routes. We refer in this ental and ocean routes. We refer in this chiefly to the great railroad systems, but we do not intend to exclude the Trans-Siberian Railroad, that now building from Persia, or the other great railroads.

5. Knowledge of the causes of dew, rain, snow, wind, and other ordinary pherain, snow, wind, and other ordinary phenomena, and knowledge of the relations of place to climate. This knowledge should be gained, as far as possible, from observation and experiment, and not from books, altho these may be used to supplement information acquired in the other

6. Ability to draw maps of the United States and of New York state. We do not mean that the child's time should be wasted in drawing elaborate maps, shaded and colored carefully. This is not a wise use of the pupil's time. The great advantage from this exercise is to be gained in rapid sketching of outline maps and filling in the important towns and physical

7. Ability to find from inspection of a map the latitude and longitude of a given place and to solve the converse prob-lem. The solution of the converse of this proposition, of course, is to find the place when given the latitude and longitude. This seems a simple thing, and yet many persons who are ranked as well educated cannot locate a place when an index of an atlas has provided them with these data. The child should be able to locate points indicated by intersecting parallles on a map of the world."

Boy Study.

A Brooklyn boy had heard discussions at home on child study—his two sisters being teachers—and was set to thinking and observation. He was quite a whistler himself, having lived in the country, and on looking into the matter discovered that few boys in the city whistled. On reporting this matter at home the sisters asked what per cent. whistled. This demanded further and closer observation; he began counting, and after a few days he began counting, and after a few days reported that of 162 boys 16 whistled, or ten per cent. Then his sisters asked as ten per cent. Then his sisters asked as to the number in the country that whistled; to this he affirmed that every one was a whistler. The family did not seem interested further, and the sisters doubt whether it is an observation that should be reported to G. Stanley Hall or not. The numerous things to be seen furnish occupation for the mind of the boy in the city; in the country there being few he attempts to amuse himself.

New York State Items.

STAMFORD, N. Y.—Stamford seminary and union school which in years gone by has held a reputation for first-class school work, has engaged Miss Elsie Hammond, a graduate of Mt. Holyoke college, Mass. as teacher of mathematics and science for the coming year.

NEWARK VALLEY, N. Y.—The people of this district have been earning a reputation for having more, than the average school facilities. As a business investment it has proved of immense help to the place for it brings patrons from out of town and gives a peculiarly attractive character to the community. Mr. Geo. E. Purple, editor of the Tioga Herald, is secretary of the board, and incidentally it may be said that he runs a neat, lively, and be said that he runs a neat, lively, and

clean home paper.

The teachers' training class is one of the special features of the Newark Valley school. Miss Grace T. Hammond, who last year had charge of the Fort Ann high school, will be the principal of the training class work. Miss Hammond is a graduate of the state normal college, Albany, and also of Mt. Holyoke college holding the degrees of A.B. and Ph.B.

FISHKILL-ON-HUDSON, N. Y.—School District No. 8, town of Fishkill, possesses one of the best equipped buildings on the Hudson river. But the natural increase of the juvenile population has been such that the large school built in 1890-1 is filled to overflowing.

At the recent election the outgoing members of the board were re-elected, they are Messrs. Benjamin Hammond, James A. Murray, and J. Milton Davis, It has been the policy of this district to be careful in the choice of the trustees and then to keen them; in office for many ways. then to keep them in office for many years

in succession. Mr. William J. Millar, the son of Supt. John Millar, of the Drum Hill district of Peekskill, is the principal. He was chosen by the board of education when stationed at Mt. Kisco, Westchester county, and has served one year in Fishkill-on-Hudson

with satisfaction. He was re engaged at an advance of salary. There are thirteen teachers now engaged in the district, all picked women. The board believes that picked women. The board believes that in choosing the best women it can get teachers who are well fitted for the work, and not such as require fitting the school to the teacher. Every year richer districts call teachers from this school, in testimony to the wise policy of the board.

ALBANY, N. Y.—At a recent meeting of the Regents A. M. Holmes of Morrisville and M. D. Jewell, of Richfield Springs, were reappointed as dental examiners.

Here and There.

A thousand delegates are at Christiania, Norway, to attend the Young Men's Christian Association's world's congress.

It is seriously suggested in some quarters to extend the summer vacation of public schools to October 1st as a general practice. As long as there are vacation practice. As los schools, why net?

WASHINGTON.-During and since the Spanish war the instructors in military science at institutions of the different states where military instruction is given have been almost wholly drawn from the retired list, but in the future officers from the active list may be detailed to these institutions.

The Philadelphia Councils' school committee has set aside \$200,000 for a manual training school and library on the site of the Fairhill reservoir.

MADISON, Wis.—The bulk of the estate of the late President Adams has been willed to Mrs. Adams in trust, for her use during her lifetime. At her death it is to go to the University of Wisconsin. The will provides for the creation in the university of fifteen accordance in the university of the creation in the university of fifteen accordance in the university of fifteen accordance in the creation in the university of fifteen accordance in the university of the creation in the wan provides for the creation in the university of fifteen scholarships of \$10,000 each. Five of these fellowships will be in the department of English language and literature, five in Greek and five in modern history. history.

PHILADELPHIA, PA .- Six additional instructors have been selected for the commercial high school for girls, their service to begin in September. The appointees are all graduates of the normal school, and they will be paid, next year, a salary of \$1,050 each. They are Lily McLean, assistant teacher Lorge school. Mark M \$1,050 each. I ney are Lily McLean, assis. "If tant teacher, Logan school; Mary M. gift. Stewart, William Welsh school; Eleanor V. Martin, E. M. Stanton school; Marfew garet P. Pennington and Amanda C. Beitdler, George G. Meade school, and Ida Ziegler, Bridesburg school.

PRINCETON, N. J.—The summer schools for conditioned entering students have started in with a rush. There are now four of these schools, two of which were instituted this summer, running on their scheduled hours. So great has been the demand for summer instruction among the incoming freshmen, that last year the demand for summer instruction among the incoming freshmen, that last year the schools during the last few weeks before the final examinations for admission were running from 8 in the morning until after. 12 at night.

The Rev. John Lancaster Spalding, who is the senior suffragan bishop in the archipeiscopal see of Chicago, and who is being tavorably talked of to succeed Archbishop pamphlets on scientific subjects, and his Feehan, has been for twenty-five years Bishop of Peoria. He was born in Lebanon, Ky., in 1840, and as a boy was a favorite of his uncle, Martin J. Spalding, the was an authority on electrical matters, and was a life-long friend of them bishop of Louisville and afterward and one son who lately was elected president. The Rev. John Lancaster Spalding, who episcopal see of Chicago, and who is being tavorably talked of to succeed Archbishop Feehan, has been for twenty-five years Bishop of Peoria. He was born in Lebanon, Ky., in 1840, and as a boy was a favorite of his uncle, Martin J. Spalding, then bishop of Louisville and afterward Archbishop of Baltimore.

Prof. Alexander Graham Bell, inventor of the telephone, is a most conspicuous figure at the Minneapolis convention of the N. E. A. His special interest was of course in the department devoted to the considera-tion of problems in the training of defective children. His summer home is at Baddeck, Cape Breton. He is there personally su-pervising the construction of an airship representing the result of years of study and an expenditure of many thousands of dollars. The craft is going to be twenty feet long, and will be composed of seventy-five distinct parts. It will be celled internally with canvas, and in places with linen stretched on pring wires. this with canvas, and in places with linen stretched on piano wires. Five miles of this wire have already been used in the construction. The principle of the kite will be used to a considerable extent in this machine, which is to carry human freight. This means that the aeroplane system, not used in any of Santos-Dumont's airships, will be a feature of Prof. Ball's meaning.

plish with his air ship he does not divulge, but those who know him insist he intends to outdo Santos-Dumont in the conquer-ing of the great problem, and they predict a machine ready for a test of mettle with Santos-Dumont's newest airship now building in tais country for the World's Fair aerial contests at St. Louis in 1904.

Henry S. Curtis has an article on Vacation Schools for City Children" in Harper's Magazine for June, in which he tells us that the first vacation school was founded in Boston by Miss Very, in 1878; but the first to become part of a regular school system were founded in 1886, by Dr. William Barringer, then superintendent of Newark schools.

The playground movement, like most educational movements of the past ceneducational movements of the past century, started in Germany. For several years the work in New York was carried on by the Society for Improving the Condition of the Poor. During 1897 this society operated ten vacation schools. In 1898 the work was taken up by the board of education. Superintecdent Stewart was placed in charge a man of provessing the statement of education. Superintendent Stewart was placed in charge, a man of progressive ideas. Since then the work has settled together and become more of a system. It had more definite aims, and carried the next site of the second state of the second state. ried them out with more precision.

The Washington Star gave expression to the groan of many an educational orator, without realizing it, when it printed

tor, without realizing it, when it printed this squib:

"My young friend," said Senator Sorghum, "you have an exceptional talent for speech-making."

"Yes," replied the statesman, who gets a great deal of applause from the galleries.

"I feel justified in saying that oratory is a grift."

Explain how another colony will be gatiful by the United States on the course of the states on the course of the same of the united states on the same of the united states of of

"That's what it is! There are mighty few people who can get paid for it nowadays."

Recent Deaths.

GAMBIER, OHIO .- Dr. Edward C. Benson, senior professor in Kenyon college, died August 18, at the age of seventy nine. The professorship of Latin was endowed by the alumni in his name.

Cheshire, Mass., Aug. 17 (Special). Geo. M. Hopkins, associate editor of *The Scientific American*, died here, aged sixty. His death resulted from a stroke of apoand one son, who lately was elected president of the Cosmos Pictures Co.

Robert Bach McMaster, who died from rom the College of the City of New York, and later from Columbia Law school.

HAVERHILL, MASS.—Dr. Isaae N. Carleton, for many years the principal of the Carleton school in the Bradford district, died at his home on Main street on August 8. He was a native of Bradford, having been born in the section now known as Ward Hill, in 1832. He was a graduate of Dartmouth college, and he began his work as a teacher in Phillips academy, Andover, as instructor in classics and mathematics. From Andover, he went to Peabody, then South Danvers, as principal of the high school, and later, he started a private school at Medford which he afterwards moved to Lexington. In 1869, he was elected principal of the HAVERHILL, Mass.-Dr. Isaae In 1869, he was elected principal of the Connecticut State Normal school at New Bell's machine.

Connecticut State Normal school at New Just what Prof. Bell hopes to accomBritain, where he remained fourteen years,

his work there being of special value to the public schools of the state. Upon leaving New Britain, he returned to his native town and established the Carleton school, an enterprise that he relinquished in 1901. He received the honorary degree of Ph.D. from Dartmouth.

Topics of the Times.

Topics of the Times.

A regular time should be assigned in school for the study of current events. It need be only a few minutes—the great points are that it should be a part of the regular program and that the pupils should preparefor the exercise. At the appointed time the teacher asks, "Who has items of news?" A pupil rises and gives something he has selected. This is commented on and questions are asked.

The leading events may be reviewed (not the petty details), the teacher pointing out the important matters, so that a survey of the world more or less broad may be gained. Geographical names and terms should be explained, the questions asked being "What?" "Where?" "Why?"

Biographies of famous persons whose deaths occur from time to time, or those who spring into prominence in various fields, may be used in the history class. Allusions to historical persons may form the

neids, may be used in the history class. Al-lusions to historical persons may form the basis of a general history lesson. Items referring to places and customs may be used in the geography class, and the many para-graphs relating to botany, zoology, astron-omy, meteorology, etc., will help add zest to the science work, which usually goes under the head of n ture study.

Questions on Current Events.

Explain how another colony will be acquired by the United States on the

isthmus.
What question has lately been under

what question has facely been under discussion at Rome?
For what purposes will Pan-American congresses be held this fall?
What arrangements has the United

States government made for food tests?
Why did not the bituminous coal
miners join the strike?
When was Stony Point, N. Y., made a

state reservation, and why?
Why did the Baldwin-Zeigler expedition

return to Norway?

In what ways has our immigration lately

been undesirable? When was King Edward crowned, and

What is the new Order of Merit? Name the men appointed to it.
What will be the steps toward self-gov ernment in South Africa?

Explain the cause of the late riots in

rance. What agreement have Great Britain and apan made with Corea?
Why is Cuba in need of money?

Tell about the first case that came be-fore The Hague arbitration court. How is New York city to improve its

means of transit? What remarkable journey was lately made from Paris to New York?

Why did Australia's governor-general resign?
Where have wars occurred since 1864?

What success have negroes had as land owners?

Pilgrims to Mecca.

The pilgrims converge upon the holy cities of Mecca and Medina from three directions: from the south from Oceania, directions: from the south from Oceania, Java, Sumatra, Indo-China, India Turkestan, and southern Persia, who pass into the Red sea thru the strait of Bab el Mandeb and on to Jeddah, the port of Mecca; from the north, Persians, Turcomans, and people from Asia Minor and European Turkey; from the west, Egyptians, Moroccans, Algerians, Tunisians, and Turks, who reach Jeddah thru the Suez canal. The total number every year exceeds 100,000, practically all of whom are present at the fête of Bairam.

Notes of New Books.

Morphinism and Narconias from Other Drugs, Their Etiology, Treatment, and Medico-Legal Relations, by T. D. Crothers, M.D., superintendent Walnut Lodge hospital, Hartford, Conn.; editor of the Journal of Inebriety; professor of mental and nervous diseases, New York School of Clinical Medicine, etc. In the opening chapters Dr. Crothers presents a valuable history of the discovery and introduction of the use of opium and how the alkaloid morphine was separated from the crude drug. He also gives the classes of users and shows the dangers that may easily arise from the physician allowing the patient to use the needle. He also explains the way in which one may form the morphine habit and why it is formed. He then goes on to the distinction, classification, and stages of morphinism. The diagnosis and treatment of morphinism and the necessity to distinguish morphinism from morphamania is clearly shown. He presents the medico-legal side of morphinism and why those affected are not to be trusted to give evidence. He briefly takes up other drug habits and their treatment.

The book is written in a style that is interesting and while it is designed for the use of physicians it will be found both profitable and interesting to others. There are perhaps too many cases cited and so the particular subject under treatment may fail to impress one as it would if less were given under each heading. Price, \$2.00 net. (W.B. Saunders & Company, Philadelphia and London.)

N. L. G.

Essentials of Chemistry for Secondary Schools, by John C. Hessler, Ph. D., instructor in chemistry, the University of Chicago, and Albert L. Smith, Ph. D., instructor in chemistry, the Englewood high school, Chicago. The authors of this text-book have become convinced that the laboratory method of teaching chemistry is a failure, unless combined with close study on the part of the pupil and regular recitations. So they have written a text-book of four hundred pages descriptive of the leading elements and compounds in a style adapted to study. This follows the usual order, beginning with the gases, and ending with the important metals. The carbon compounds are especially full. Attention is constantly drawn to industrial operations. This is followed by a laboratory manual of experiments for the student's work, with the directions unusually full and explicit. This is also bound separate. The whole plan is most excellent. The use of the arrow in the place of the sign of equality in the reactions is novel. If only the new spellings could have been used, little further could be desired in a text-book. (Benj. H. Sanborn & Co., Boston. Price, \$1.20.)

The Expansion of Gases by Heat. Memoirs by Dalton, Gay-Lussac, Regnault and Chappuis. Edited by Wyatt W. Randall, Ph. D., headmaster of the Mackenzie school, Dobbs Ferry, N. Y. This is volume sixteen of the scientific memoirs, edited by Dr. J. S. Ames, of Johns Hopkins university. The present views of the constitution of gases rest upon the researches of Dalton, Gay-Lussac, and Regnault. In a general way the results of their investigations have long been common property. The original papers in which these were presented to the scientific world have been little known. These are now translated, so far as they show the data upon which the reasoning rests. The laws of gaseous expansion at different temperatures form the basis of the kinetic theory. Dalton began the work, and while his manipulations were crude and admitted numerous sources of error, they led the way by gradual elimination so that the later work established the laws. (American Book Company.)

Physics: A Text-Book for Secondary Schools, by Frederick Slate, professor of Physics in the University of California. It is refreshing to find an author who has the courage of his convictions. Believing that success in the study of the laws which control the relations of material things will be more readily secured by basing all comparisons upon similarity of phenomena, Professor Slate has written his text-book upon this plan. Ignoring entirely the old system which rested upon the states of matter, all the phenomena of bodies in the various states are placed together. The transformation of energy is given a large place. The various theories are well developed; but the applications are generally omitted. The illustrations given are nearly all new and entirely out of the usual form. Most of the demonstrations are mathematical. An outline of experiments is placed at the end designed for laboratory work, planned to be very largely supplemented by oral direction from the instructor. (The Macmillan Company, New York. Price, \$1.10.)

Elements of Physics, by Fernando Sanford, professor in Leland Stanford Junior university. This text-book is planned upon the theory of combined recitations and labortory work. It starts at once with the simple machines and develops the various properties of solids and the states of matter from the different actions of bodies. The distinctions between energy, force, motion, acceleration, and momentum are closely developed, and just sufficient formulæ are introduced to indicate their use. The various vibratory forces, clearly treated with a view to recent developments, with optics make the final subject for study. The close relation of the various phenomena of magnetism and electricity is insisted upon, and the dynamo as the foundation of modern industry is given a prominent place. Heartz and Marconi's work are briefly shown. The illustrations are out of the usual line. (Henry Holt & Co., New York. Price, \$1.20.)

Journal of the New York Entomological Society, March number. This number contains a series of papers recording original observations upon a number of species of insects, most of them new. The first, by Otto Seifert, describes two species of Arctidae found near New York city, with a full account of their life history. Dr. John B. Smith treats in a similar way of Aedessmith, and Glenn W. Herrick of Ancideres texana. All the papers are of interest and large value, but the one by V. L. Kellogg and B. L. Chapman, which enumerates the species of Mallophaga taken from the intestines of birds along the Pacific coast, and gives enough of their characteristics to indicate where they were swallowed, deserves special mention. All the papers are illustrated by photographic plates. (New York: published by the society.)

The Second Report of the United States Board of Geographic Names has been printed and differs but slightly from the original Congressional edition of May, 1900. Advantage has been taken to correct such errors as were discovered in the first edition, and they were very few. The board is made up of members of government departments, most of whom are specialists in different departments, so that their decisions carry great weight. The board has followed local usage as far as practicable. In cases where it has departed from local usage the following principles have been observed: (a) The avoidance, so far as seems practicable, of the possessive form of names; (b) the dropping of the final h in the termination burgh; (c) the abbreviation of borough to boro; (d) the spelling of the word center as here given; (e) the discontinuance of the use of hyphens in connecting parts of names; (f) the omission wherever practicable of the letters C. H. (court house) after the names of county seats; (g) the simplification of names consisting of more than one word by their combination into ene word; (h) the avoidance of the use of discritic characters; (i) the dropping of the words city and town as parts of names. (Government Printing Office, Washington.)

A College Algebra, by G. A. Wentworth, author of a Series of Text-Books in Mathematics. Revised edition. Prof. Wentworth's books have an established reputation. This College Algebra first treats the usual topics of algebra very fully, giving many problems well calculated to stimulate to careful reasoning. This is followed by the various additional topics which the college student who wishes to specialize in mathetics must understand. These are treated clearly and illustrated by numerous problems. Some of them deserve special commendation for the manner of treatment. The doctrine of chance, particularly, is presented in a way that any student can comprehend. The principles upon which logarithms depend are unusually well discussed. The book includes enough of the special subjects to meet the needs of an elective course as well as the usual Freshman requirement. (Ginn & Company, Boston. List price, \$1.50.)

High School Algebra, by M. A. Bailey, A. M., Department of Mathematics in the New York Training school for teachers, New York city. In the place of the usual abstract and blind method of opening up the subject of algebra, the author starts from a series of propositions each of which he demonstrates. Then he illustrates the principles so proved by application to a (number of simple problems. Thus the pupil is quickly and readily led to the use of symbols for numbers and quantities and te appreciate their value. Proceeding thus always from the known to the unknown, the pupil is led to consider the means carefully and so to gain power in discriminative reasoning. The introduction of logarithms at an early stage is a valuable feature and gives the teacher the opportunity to train in the use of this ready assistant. The work covers all that is necessary for entrance to college. (American Book Company, New York, Cincinnati and Chicago. Price, 90 cents.)

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